

APR 21 1936

CALIFORNIA AND WESTERN MEDICINE

Owned and Published Monthly by the California Medical Association

FOUR FIFTY SUTTER, ROOM 2004, SAN FRANCISCO

ACCREDITED REPRESENTATIVE OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

VOLUME 44
NUMBER 4

APRIL • 1936

50 CENTS A COPY
\$5.00 A YEAR

CONTENTS AND SUBJECT INDEX

EDITORIALS:

Coronado Annual Session: May 25-28.....250

Members of C. M. A. Standing Committees to Meet at Coronado: Important That All Committee Members Should Attend the Conferences.....251

Joseph Pomeroy Widney, A. M., M. D., D. D., LL. D., Founder of the Los Angeles County Medical Association; Who, at the Age of Ninety-Five, Still Carries On251

Basic Science Law of State of Washington: Interesting State Supreme Court Decision.....252

Kern County Hospital Case Decided.....253

On This and That.....253

EDITORIAL COMMENT:

The Therapeutic Use of Convalescent Serum in Poliomyelitis. By K. F. Meyer, San Francisco254

Modern Test of Kidney Function. By S. I. Movitt, Los Angeles.....255

Local Injection of Procain: In the Diagnosis and Treatment of Derangements of Certain Joints. By Keene O. Haldeman, San Francisco256

ORIGINAL ARTICLES:

The Modern Therapy of Syphilis. By Howard Morrow, Norman N. Epstein, and Leroy K. Gay, San Francisco257

Discussion by Ernest Dwight Chipman, San Francisco; William H. Goeckerman, Los Angeles; Stanley O. Chambers, Los Angeles.

Tolerance to Alcohol: Its Mechanism and Significance. By Emil Bogen, Olive View262

Discussion by C. H. Thielen, Los Angeles; Henry W. Newman, San Francisco.

Intracapsular Fractures: Neck of the Femur. By Merrill Coleman Mensor and Earle T. Dewey, San Francisco.....271

Discussion by Paul E. McMaster, Los Angeles; Keene O. Haldeman, San Francisco; E. W. Cleary, San Francisco.

Cataracts Following the Use of Dinitrophenol: A Summary of Thirty-Two Cases. By Frank H. Rodin, San Francisco276

Discussion by Warren D. Horner, San Francisco; Hans Barkan, San Francisco; Harold F. Whalman, Los Angeles.

Medicine and Surgery in the Fleet. By Lucius W. Johnson, U. S. S. "Relief," United States Navy279

Urinary Extravasation Following Urethral Stricture. By Carl F. Rusche and Samuel K. Bacon, Hollywood.....284

Discussion by Nathan G. Hale, Sacramento; Henry A. R. Kreutzmann, San Francisco; Louis Clive Jacobs, San Francisco.

Studies in Rickets. By C. Ulysses Moore and H. G. Dennis, Portland, Oregon.....288

THE LURE OF MEDICAL HISTORY:

Joseph Pomeroy Widney, A. M., M. D., D. D., LL. D. Part I. By E. T. W.292

Twenty Years of Sanitary Engineering in California. By C. G. Gillespie, San Francisco296

CLINICAL NOTES AND CASE REPORTS:

Lung Failure. By John W. Shuman, Los Angeles297

BEDSIDE MEDICINE:

Carcinoma of the Prostate.....298

Discussion by A. J. Scholl, Los Angeles; Nathan G. Hale, Sacramento; Lionel P. Player, San Francisco.

PROGRAM—ANNUAL SESSION:

Photographs, Guest Speakers, and Officers.....301

Officers and Committees.....305

Registration Information.....306

Commercial Exhibits.....306

House of Delegates.....307

Meetings: General; Delegates.....308

Scientific Exhibits.....310

Entertainment.....311

Woman's Auxiliary312

Section Meetings.....315

STATE MEDICAL ASSOCIATIONS:

CALIFORNIA MEDICAL ASSOCIATION.....330

Minutes of the Executive Committee Meeting, March 7, 1936.....333

C. M. A. Department of Public Relations.....338

Woman's Auxiliary to the California Medical Association342

NEVADA MEDICAL ASSOCIATION.....343

MISCELLANY:

News344

Letters346

Special Articles349

Twenty-Five Years Ago352

Board of Medical Examiners of the State of California352

California Medical Association Directories.....Adv. pages 2, 4, 6

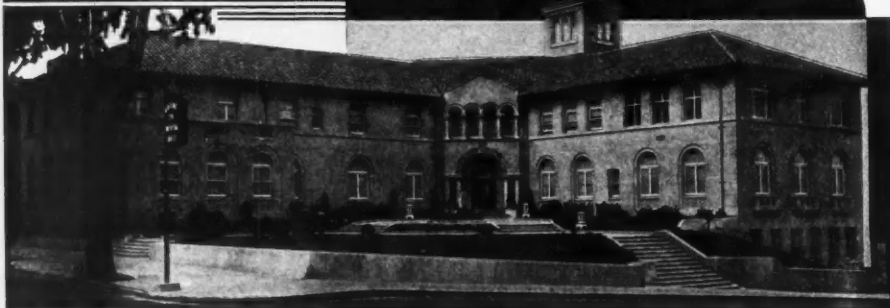
Book ReviewsAdv. page 11

ADVERTISEMENTS: (Index)

.....Adv. page 8

GREENS' EYE HOSPITAL

Telephone
WEat 4300



*for Consultation, Diagnosis
and Treatment of the Eye*

THE HOSPITAL MAINTAINS

An outpatient eye department which functions daily from 9 a. m. to 6 p. m. A report of findings and recommendations for treatment is returned with patients who are referred for consultation.

An ear, nose and throat department is conducted on the same basis as the eye department.

Emergency Eye Service

A twenty-four hour emergency eye service, including Sundays and holidays.

BUSH AT
OCTAVIA
STREET
SAN
FRANCISCO
CALIFORNIA

*Address
Communications
to
the
Superintendent*

Staff

OPHTHALMOLOGY

Aaron S. Green, M. D.
Louis D. Green, M. D.
Martin I. Green, M. D.
Einar V. Blak, M. D.
Vincent V. Suglian, M. D.
David Kadesky, M. D.
Ernest Hessing, M. D.

OTOLARYNGOLOGY

Walter L. Allespach, M. D.
Ernst Wolfes, M. D.

MEDICAL DIRECTOR

William R. Jepson, M. D.



ROBERT A. PEERS, M. D.
President, California Medical Association
1936

CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

Vol. 44

APRIL, 1936

No. 4

SALUTATION FROM PRESIDENT PEERS

Californians have been blessed beyond most of the rest of the world by the lavishness with which Nature has endowed our wonderful State with an astonishing variety of great natural wonders. And, as though the beauty and grandeur of towering mountains, great valleys, unsurpassed forests, spacious harbors and magnificent marine views were not a sufficient heritage, Nature has given California a climate equalled by no other country. Coronado and San Diego are situated in a location noted for scenic and climatic advantages. While, in addition to the natural gifts so bountifully bestowed by Nature upon that region, the beauties of Coronado and San Diego have not been spoiled by the works of man.

This year, besides other appeals, San Diego furnishes the extra attraction of an International Exposition in which the California Medical Association, the American Medical Association, and other scientific bodies have installed very attractive and worthwhile exhibits; an entire building with 22,000 square feet of space, having been offered to and accepted by the California Medical Association for a Medical Science Exhibit.

To this beautiful section of California, during May 25 to 28, will come medical men and women from all parts of California to attend the Sixty-fifth Annual Convention of the California Medical Association. A wonderful program of great scientific value and interest has been provided by your Committee on Scientific Program.

Your officers and councilors extend a most cordial invitation to every member of the California Medical Association to visit Coronado and San Diego on May 25 to 28, and enjoy the beautiful scenery, the delightful climate, the great Exposition, the scientific program, and the social contacts with your brother (and sister) practitioners.

Come!

Cordially yours,

ROBERT A. PEERS

California and Western Medicine

Owned and Published by the

CALIFORNIA MEDICAL ASSOCIATION

Four Fifty Sutter, Room 2004, San Francisco, Phone DOuglas 0062

Address editorial communications to Dr. George H. Kress as per address above; advertising and business communications to Secretary-Treasurer, Dr. Frederick C. Warnshuis, also at above address.

EDITOR GEORGE H. KRESS

Advertisements.—The Journal is published on the seventh of the month. Advertising copy must be received not later than the fifteenth of the month preceding issue. Advertising rates will be sent on request.

BUSINESS MANAGER . FREDERICK C. WARNSHUIS

Advertising Representative for Northern California

L. J. FLYNN, 544 Market Street, San Francisco (DOuglas 0577)

Copyright, 1936, by the California Medical Association

Subscription prices, \$5 (\$6 for foreign countries); single copies, 50 cents.

Volumes begin with the first of January and the first of July. Subscriptions may commence at any time.

Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this journal.

Contributions—Length of Articles; Extra Costs.—Original articles should not exceed three and one-half pages in length. Authors who wish articles of greater length printed must pay extra costs involved. Illustrations in excess of amount allowed by the Council are also extra.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

	PAGE
Editorials	250
Editorial Comment	254
Original Articles	257
Lure of Medical History	292
Clinical Notes and Case Reports	297
Bedside Medicine	298
Program: 1936 Annual Session	301
California Medical Association	330
C. M. A. Department of Public Relations	338
Woman's Auxiliary to C. M. A.	342
Nevada Medical Association	343
News	344
Letters	346
Special Articles	349
Twenty-Five Years Ago; State Examining Board	352
Index to Advertisements	Adv. p. 8

EDITORIALS†

CORONADO ANNUAL SESSION: MAY 25-28

Annual Session of California Medical Association Only One Month Distant.—"Time marches on" and, almost before we may realize it, the sixty-fifth annual session at San Diego will have convened, adjourned and taken its place in the records of events that have been.

In this issue are printed the programs of the general meetings, the twelve scientific sections, the Woman's Auxiliary, and also the order of business of the House of Delegates, together with other activities or features, such as scientific and commercial exhibits, all of which will be in evidence at the Hotel del Coronado in San Diego for this year's annual session, officially announced to commence on Monday, May 25, and to carry through Thursday, the 28th.

On Sunday, the Cancer Commission and pathologic programs will be given. On that day, too, the first annual conference of standing committees with State Association officers will take place, and also the first meeting of the State Council.

The business, scientific and entertainment programs, as given on pages 305 to 329, reveal the wide scope of the Association's work, and a careful inspection of the many presentations should assure the intense interest which they will necessarily have for all members who register.

* * *

"California Medical Association Day" at the Exposition, Tuesday, May 26.—Mention has already been made, on page 76 of the February issue of CALIFORNIA AND WESTERN MEDICINE, of the splendid exhibits in the Hall of Medical Science of the San Diego Exposition. A letter received from Dr. Lyell C. Kinney, ex-president of the California Medical Association, states that on Sunday, March 15, more than 9,000 persons visited those exhibits which, at that time, had been only partially installed—showing clearly the interest taken by the laity in all such public health demonstrations when properly presented.

Tuesday, May 26, has been designated as "California Medical Association Day," and all signs point to a gathering of medical men and women on that occasion that will prove a peak attendance in annual session records.

* * *

Hotel Reservations Should Not Be Delayed. The last two issues of this magazine mentioned the limited hotel accommodations then still available. The Hotel Del Coronado has for some time been reserved to full capacity, and now the San Diego hotels alone must be depended upon to care for the great gathering of medical visitors to be expected. For a list of these San Diego hotels, see page 209 of the March issue.

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comment column, which follows.

If, therefore, you are not already enthused regarding the numerous attractions at the San Diego meetings, and decisive as to your own attendance, scan the programs in this issue, and ask yourself if you can really afford to stay away?

MEMBERS OF C. M. A. STANDING COMMITTEES TO MEET AT CORONADO: IMPORTANT THAT ALL COMMITTEE MEMBERS SHOULD ATTEND THE CONFERENCES

History of the Present Constitution and By-Laws of the California Medical Association.—The present constitution with by-laws of the California Medical Association, after a four-year controversial career in their forming, were adopted by the House of Delegates at the San Diego annual session of 1929. The final form, approved without a single dissenting vote, was based on the draft prepared by a special committee appointed in December, 1926, by Council Chairman O. D. Hamlin. Both the previous constitution and by-laws, and the first draft of the proposed revision as presented by the special committee, were printed on pages 244-258, in the *CALIFORNIA AND WESTERN MEDICINE* of August, 1927.

* * *

The Provision for "Standing Committees."—The special committee on revision of by-laws, in its transmittal letter to the Council of March 30, 1927 (given on page 248 of the *JOURNAL* for August, 1927), stated that, "In an association as large as that of California, it is very necessary that a practical, centralized, elastic method of organization shall exist, if best results are to be attained"; and in the proposed revision this thought was constantly kept in mind.

Hence, one of the important inclusions in the first draft of the by-laws, adopted in 1929, was contained in "Chapter VII—Committees," and provided for "standing" committees; the previous constitution and by-laws containing no stipulations concerning committees, other than the executive and program committees.

The special committee felt that a group of standing committees, of sufficient number and nature to cover practically all major activities that might come up in organized or scientific medicine, could be of great aid in the further development of the California Medical Association, by making it possible to carry out, in harmonious and efficient manner, those policies to which the House of Delegates of the Association had given its sanction. Through the elimination of a large number of previously existing special committees, that "came and went," the succeeding years have demonstrated the value of the proposed changes; even though the end-results have fallen considerably short of what was hoped could be attained.

* * *

California's Size a Drawback to Committee Conferences.—If California were a state of lesser geographical area than is contained in its almost imperial domain covering a length of 800 miles and a breadth of 200 miles, the members of

the standing committees would have been able to work to much better advantage than has been the case. In short, because of the great distances to be covered by members of a committee, it has been almost impossible to secure meetings; and the Association was not in position to pay the railroad and other expenses involved by having the members of the fifteen standing committees meet with one another once or more yearly, to plan and carry on their work as outlined in the by-laws.

* * *

At San Diego, on March 24, Conferences of Standing Committees Will Be Held.—To overcome these disadvantages, it was proposed, at the March 7 meeting of the Executive Committee, that the Association make an effort to bring together the members of the standing committees for preliminary conference at San Diego, on Sunday, May 24. Association Secretary Warnshuis will send to all members of standing committees additional information concerning the plans. The secretary's minutes of the Executive Committee action read as follows:

"Editor Kress presented a recommendation that the Secretary arrange for a conference of chairmen and committeemen of all standing committees and special committees, for the purpose of becoming more intimately acquainted with the problems of the Association, and for the purpose of making recommendations (on Sunday, May 24, 1936, at Coronado, at 2 p. m.); and that the President and the Secretary be in charge of this Conference; and that notice be sent to the chairmen and members of each committee urging their attendance; and that the Council appropriate a reasonable sum to defray the hotel expense for one extra day for those attending this conference. Carried."

* * *

Every Member of a Standing Committee Should Be at Coronado on May 24.—It goes without saying, therefore, that members of standing committees should show their interest in the Association's work, and a recognition of their responsibilities as committeemen, by being present at this year's first annual session. With the conference meeting on Sunday (for a preliminary discussion of their problems), and contacts and exchange of views on succeeding days, it should be possible for the members of each and every committee to allocate among themselves their duties, so that active studies and work may be energetically carried on during the coming year. If the program materializes as the Council of the Association hopes, the reports of next year's annual session will show real progress in committee work.

JOSEPH POMEROY WIDNEY, A.M., M.D., D.D., LL.D., FOUNDER OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION; WHO, AT THE AGE OF 95, STILL CARRIES ON

A Biographical Sketch of Special Interest to California Physicians.—In referring to the absorbing sketch of Joseph Pomeroy Widney, M. D., founder of the Los Angeles County Medical Association, printed in the *Lure of Medical History* department, on page 292, two thoughts come to our mind:

First, whether there is in the United States a single medical society, which today has living, at the ripe age of ninety-five, a founder, who is still active at work as an author—with one book added to his list during the last year, and another soon coming from the press; and,

Secondly, whether, among the hundreds of county medical societies in the United States, there is still another able to present, as its founder, a member of the medical profession, who, in seventy years of strenuous work after leaving medical college, has come to have to his credit so unusual a record of professional and civic service such as can be claimed by Doctor Widney.

Through affiliation with the medical school founded by Doctor Widney, it has long been the privilege of the editor to be quite aware of this colleague's place in the medical life of Southern California; and on more occasions than one, he has seriously reproached himself for not having secured some of the valuable historical information concerning medical events of former days, which only Doctor Widney could impart. It is, therefore, a real satisfaction to be able to present, in this issue, the first part of Doctor Widney's life story, compiled by friends, after a recent interview.

* * *

Doctor Widney's Many Services to Profession and State.—The record of Doctor Widney's broad vision and achievements makes a fascinating story, even though briefly outlined, from a perusal of which every member of the California Medical Association may truly profit, as one always does in contemplating any life of such consistent service to both fellows and race.

Certainly every member of the Los Angeles County Medical Association should read the story of this colleague who brought that organization into existence, and who, in thus adding one more to a large list of honors, has doubly honored the Association as its founder-sponsor: a physician who received his medical degree in California as long ago as 1866, and whose subsequent life career has been so full and fruitful that even in California, where all things seem possible, it stands out, in what one may well term "conspicuous and splendid isolation."

The members of the California Medical Association, then, extend their greetings and good wishes to Dr. Joseph Pomeroy Widney, a still-surviving colleague who, in these last seventy years, has served so faithfully and also greatly honored his profession. Our heartfelt wish to him: That his days, still ahead, may be as full of meaning and joyful service as those of the eventful years gone by!

BASIC SCIENCE LAW OF STATE OF WASHINGTON: INTERESTING STATE SUPREME COURT DECISION

Purpose of Qualifying Certificate (Basic Science) Laws.—Nine years ago, on page 525 of the October, 1927, issue of CALIFORNIA AND WESTERN MEDICINE, appeared the first of a series

of editorial discussions on so-called basic science laws, in each of which was emphasized the value of such legal enactments as a means of protecting the public health by providing mandatory legal provisions whereby healing-art practitioners, before being licensed to practice, should also be required to give evidence that they possess, in addition to purely professional attainments, adequate knowledge of certain basic or fundamental sciences.

* * *

The First Basic Science Laws of the United States.—Attention was called to the first law of this nature, that of Wisconsin, which was enacted on June 12, 1925, and of a similar act passed by the State of Connecticut, which became operative some seventeen days later. Included in the group of seven other commonwealths which have passed such laws since 1925, is the State of Washington; and it is concerning a recent decision by the Supreme Court of that state that the comments below are made.

* * *

Washington Supreme Court Rules that Chiropractors Cannot Claim Basic Science Act Exemption.—The action at issue, which recently came before the Supreme Court of the State of Washington, was on an appeal from the King County Superior Court, wherein a chiropractor, not licensed as such in Washington (and not eligible to chiropractic licensure, unless previously qualified through a basic science certificate), claimed, among other contentions, that to require him

"... to pass an examination in subjects [those of basic science: anatomy, physiology, chemistry, pathology, and hygiene], which have no relation whatever to the functions of chiropractic healing, would be a denial of liberty and of due process of law and, therefore, unconstitutional and void."

The opinion of the Supreme Court stated:

"... it cannot be doubted that no one has a natural or absolute right to practice medicine or surgery, and that the state may, under its police power, regulate within reasonable bounds, for the protection of the public health, the practice of medicine and surgery by defining the qualifications one must possess before being licensed to practice the same; and that a chiropractor is deprived of no constitutional right by being required, before receiving a certificate to practice his profession, to have adequate knowledge of the subjects laid down by the statutes of this state."

* * *

Opinion of the Washington Supreme Court Is Printed in This Issue.—The full opinion of the court appears on page 349 of this number. Because a qualifying certificate (basic science) law has been advocated for California, the decision of the Supreme Court of Washington is of importance. It is to be hoped, therefore, that members of the profession in California who are in doubt concerning the need of such legislation will take the time to read this recent opinion. The proposed California qualifying certificate, as discussed at the recent conference of state officers and county society secretaries, was commented on in last month's issue of CALIFORNIA AND WESTERN MED-

CINE on page 221. Readers who are interested in the subject may find the remarks there printed also worthy of perusal. As then stated, such a law to be of value in California must be passed by initiative vote of the electorate; but because of amended statutes for registration enacted by the 1935 Legislature, it will not now be possible to present to the voters of California a qualifying certificate law until the state election of November, 1938.

The basic science laws which to date have been enacted by other commonwealths all attest to the great value of this type of legislation, especially in states having "multiple examining boards," of which California is one.

KERN COUNTY HOSPITAL CASE DECIDED

Petition of Kern County Supervisors for Hearing Before Supreme Court Denied: Patients Able to Pay Can No Longer Be Admitted to County Hospitals.—The decision of the District Court of Appeal for the Fourth Appellate District permanently enjoining the admission of non-indigent patients to the Kern General Hospital, was made the present law in California when the Supreme Court, on March 30, 1936, denied the petition for a hearing of the Kern County Supervisors, supported by *amici curiae* representing the supervisors of the counties of Santa Barbara, Solano, Shasta, Calaveras, Colusa, Sutter, Stanislaus, San Luis Obispo, Tehama, Yolo, and San Joaquin.

In its decision the Appellate Court defined indigency in a manner that may require further interpretation. We suggest that the opinion, which is reprinted in full on page 189 of the March number of CALIFORNIA AND WESTERN MEDICINE, be once again carefully read.

If the petition had been granted it would have been necessary to argue the case once again and the Supreme Court could have come to any conclusion that it considered to be required by the law. The effect of the denial by the Supreme Court of the petition for a hearing is that the decision of the District Court of Appeal for the Fourth Appellate District is final and is the present law in this State on the subject of the powers of boards of supervisors of counties with respect to the admission of patients to county hospitals.

It is noteworthy that the District Court of Appeal decided that the admission of patients able to pay the cost of private hospitalization into county hospitals is contrary to Article IV, Section 31, of the Constitution of the State of California. The Court reasoned that to hospitalize patients able to pay the cost of private hospitalization would amount to a gift of public funds to private individuals. The foregoing section of the Constitution forbids the State or any political subdivision of the State to make a gift of public moneys to any private individual. Thus, it is clear that the reasoning of the opinion of the District Court of Appeal forbids not only boards of supervisors to admit patients into the county hospital

who are able to pay the cost of private hospitalization, but also forbids the legislature to enact any statute purporting to authorize boards of supervisors so to do, for the legislature as well as county boards of supervisors is bound by the Constitution.

Thus the long efforts of the taxpayers* of Kern County, including physicians and hospitals, to stop this use of public funds, have succeeded. The California Medical Association, recognizing the destructive effect upon medicine and hospitals in California of any extension of public hospitalization to patients able to pay for care, has assisted whenever possible, and is gratified at the success and grateful to those whose efforts brought it about.

ON THIS AND THAT

Danger of Overdoing Vitamin Therapy.—In our March issue, on page 149, Professor Chauncey D. Leake, of the department of pharmacology of the University of California Medical School, sounded a needed warning on the dangers of indiscriminate and indefinite use of vitamins. The fact that a death has already been recorded in California, presumably because of improper vitamin therapy, should make physicians willing to reconsider the entire subject of vitamins; and this suggests, also, that whenever possible, the public should be cautioned to accept with hesitancy many of the bold and extreme promises concerning the value of vitamins so greatly exploited in the last several years in lay periodicals and the press. We are sure that Doctor Leake's article will be followed by reports in medical journals from the pens of other observers which will add to the knowledge concerning the potency of vitamin principles, and thus favor a more scientific usage and dosage.

* * *

Cancer Studies in California.—About five years ago two members of the California Medical Association, Doctors Walter B. Coffey and John D. Humber of San Francisco, read a paper on the treatment of cancer with an aqueous extract of the suprarenal gland; and when the article was printed in the September, 1930, issue of CALIFORNIA AND WESTERN MEDICINE, it caused much comment, both for and against what was advocated.

One of the indirect results of the discussion at that time was the authorization by the California Medical Association for the formation of its Cancer Commission, which, in more recent years, has brought to publication a notable series of articles on cancer, compiled by members of the Association and received with much favorable comment, both within and without the State.

The March, 1936, issue of the JOURNAL, page 160, presented a report from Doctors Coffey and Humber on 7,513 advanced cancer patients who

*The case was commenced by Doctors Goodall, McNamara, Cuneo, Long, Brown, Gundry, Compton, Moore, Fox, and McLain, as taxpayers of Kern County. They were represented by Attorney Alfred Siemon of Bakersfield, the law firm of Finlayson, Bennett & Morrow of Los Angeles, and Attorney Hartley F. Peart, General Counsel of the California Medical Association.

had been under clinical observation during the last five years. For the same period of time, that amount of clinical material (which passed through two California clinics), is without doubt far in excess of the number of similar types of cancer cases in any two other clinics, either at home or abroad. The statistical record on the results from the therapy used, in view of the recorded beneficial effects (as noted on page 178 in the March issue), suggests—whether one does or does not agree with the authors, on their points of view concerning the constitutional nature of cancer, is perhaps less important—that such extracts are worthy of careful consideration.

A scourge such as cancer, which, up to the present time has given little favorable response to the many methods of attack launched against it, offers a field for scientific study and possibilities that makes all honest endeavors to overcome this malignancy worthy of careful consideration. Doctors Coffey and Humber, in their suggestive paper, state that their percentage of patients still living at the end of five years measures up to and even exceeds the average to the credit of some of the other accepted methods of cancer treatment. Since then, when other therapy seems to be contraindicated, these investigators offer licensed physicians an opportunity to use and try out the treatment of cancer with an aqueous extract of the suprarenal gland, it would seem permissible to turn to the extract they have prepared. With a large number of independent observers keeping careful check on the results, the value of this new mode of procedure could, in proper time, be determined.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 330.

EDITORIAL COMMENT[†]

THE THERAPEUTIC USE OF CONVALESCENT SERUM IN POLIOMYELITIS

Although many authors have cast doubts on the value of convalescent serum in the treatment of poliomyelitis, it must be frankly admitted that the case for or against this form of biologic therapy has not been made, despite vociferous argumentations. Since it is quite problematical that in the near future an active method of immunization will be developed against a disease which is conditioned by unknown and uncontrollable host factors, the serum treatment should not be discarded without further investigations. That it is not such a use—

[†]This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Percentage of Paralysis in Relation to the Day on Which 2,992 Patients Were Given Serum

Beginning of the Meningeal Stage Before Treatment	Serum-Treated Cases		
	Number	Cases With Paralysis	
		Number	Per Cent
Less than 1 day....	802	33	4.1
1 day	913	50	5.5
2 days	652	44	6.7
3 days	283	48	17.0
4 days	125	15	12.0
5 days	78	11	14.1
6 days	50	9	18.0
More than 6 days..	89	27	30.3
Total	2,992	237	7.9

less procedure is indicated by the experiences collected during the 1934 epidemic in Denmark.¹

Approximately 4,500 cases in the preparalytic and paralytic stage were hospitalized. A committee appointed in November, 1934, collected a great deal of information and issued a report on the salient features. It was published as an editorial in the *Ugeskrift for Læger*, Vol. 97, pp. 837-841, 1935.

The Danish Commission recommends as early admission to hospital as possible, and a residence in the hospital of at least three weeks. Then prompt serum treatment in the hospital, with an average dose of one cubic centimeter per kilogram bodyweight. *It is emphasized that repetition of an injection—if necessary, a larger dose—is imperative on the slightest sign of progress of the disease.*

The donors of the serum were paralytic, aparetic and abortive cases of poliomyelitis. The paralytics were bled on an average on the twenty-ninth day, the aparetic cases on the twenty-sixth day, and the abortive cases on the thirteenth day after the onset of the disease. Nearly 80 per cent of all the patients admitted to a hospital were given serum by intravenous or intramuscular route. As a rule, the serum was reserved for the cases aparetic at the time of the administration. No final conclusions could be drawn as to the efficacy of the serum. The data summarized in the above table, which shows the frequency with which serum-treated patients developed paralysis, suggest that the treatment played a significant part in preventing paralysis.

Convalescent serum was not used prophylactically. However, a concentrated hyperimmune horse serum was used in two soldiers' camps. In one of them all the five hundred soldiers were given five cubic centimeters of the horse serum intramuscularly; in the other camp, only about half the soldiers, or two hundred, were treated in the same way. Since no cases occurred in the treated or untreated group, the results were negative.

Hooper Foundation,
University of California.

K. F. MEYER,
San Francisco.

¹ Jensen, Claus: *Proc. Roy. Soc. Med.*, 28:1007, 1935.

MODERN TESTS OF KIDNEY FUNCTION

It is difficult to believe that prior to 1912 there was no adequate clinical test available to determine the status of kidney function. The world owes a great debt to Rowntree and Geraghty, therefore, for the phthalein test. This method still is very satisfactory, and serves the purpose for the physician and the hospital where laboratory equipment and facilities are limited, where quick results are desired, or when a check-up of other tests of renal function becomes necessary.

The phthalein test is carried out as follows: About one hour before the test the patient is given from 400 to 600 cubic centimeters of water. One cubic centimeter of a specially prepared solution, containing six milligrams of phenolsulphonephthalein, is injected either intravenously or intramuscularly, preferably in the lumbar muscles. At the end of one hour (in case of intravenous injection) or two hours and ten minutes (two hours for excretion and ten minutes for the absorption of the drug in case of intramuscular injection), the urine is collected. It is made basic with 10 cubic centimeters of 15 per cent sodium hydroxide, diluted to one liter, and the percentage of phthalein excreted is determined by comparison with the standard, in a suitable colorimeter (*e. g.*, colorimeter Dubosq or the Dunning colorimeter).

The normal excretion of phthalein is from 40 to 60 per cent for the first hour, and from 20 to 30 per cent for the second hour (the same figures hold true for the first and second half-hours in case of the intravenous injection), although in many instances the lower normal limit (total) appears to be 50 per cent. In children the usual output is 10 per cent higher. Also the time of appearance of the dye in the urine is noteworthy. In normal function of the kidney it is from four to five minutes, following the intravenous injection.

Attempts to give the phthalein elimination a special significance, as an index of either tubular or glomerular activity, have not been entirely successful. With the study of the excretion of such substances as water, urea, and salt (which are the natural products of metabolism and are continuously eliminated by the kidney, and whose excessive elimination or retention can now be more and more definitely interpreted in terms of renal disturbances), the phthalein test has been superseded.

Studies of renal excretory products furnish a basis for deductions that lead to a more rational therapy, and to greater advances in clinical medicine than a test with a more or less mechanical interpretation can do. The phthalein test is of particular value to the physician who has not specialized in the diseases of the urinary tract and who wants to know, in numerical terms, to what degree the kidney is functioning satisfactorily.

Modern tests for renal function that deal with the normal excretory products of the kidneys can be divided into two groups: one of these is of recent development (by Addis and Van Slyke)

and constitutes a method by which the total amount of functioning tissue in the kidneys may be determined; the other group of tests aims at determining whether the kidneys, under customary conditions of diet, activity, etc., are capable of maintaining the blood and tissues free from the accumulation of urinary excretory products.

The amount of functioning renal tissue may be determined by the "blood urea clearance" of Van Slyke, which promises to be one of the most important tests for kidney function at our command, as it is now recognized that the usual test for renal function may indicate impairment only when 50 to 60 per cent of the renal tissue has been put out of commission, while the Van Slyke test detects functional impairment when the first half or less of the kidney substance is rendered inactive (or lost).

The necessary data for determining the blood urea clearance, as a measure of renal efficiency, C , are as follows: (1) the concentration of urea in the blood, B ; (2) the concentration of urea in the urine, U ; and (3) the volume of urine in cubic centimeters excreted in one minute, V . This test is expressed by the formula: $C = \frac{U}{B} \sqrt{V}$. The excretion rate observed with the average normal blood urea clearance is what would be obtained, if 75 cubic centimeters of blood per minute passed the kidneys, and all its urea were excreted.

Decrease in the volume of blood cleared of urea per minute in pathologic conditions must be due to one of two causes: either the volume of blood per minute passing through the kidneys is diminished, or the proportion of its urea removed during the passage is less than normal.

The tests which determine the ability of the kidney to prevent the accumulation of urinary excretory products within the body give an answer to the question of how well the remaining renal tissue can cope with the dietary and metabolic burden imposed upon it.

The blood chemistry has contributed a great deal to the better understanding of Bright's disease. The fact that albuminuria, increased arterial pressure, and even certain forms of uremia, often occur without an accumulation of urinary excretory products within the body, made it clear that "nephritis" is not solely (nor even predominantly) characterized by diminished kidney function. Urea nitrogen, creatinin, and uric acid are considered most important substances in the blood to be studied for testing the kidney function: as renal insufficiency develops, a successive retention of urea, uric acid, and, finally, creatinin within the blood takes place. The blood urea nitrogen has been, and still is, the substance most generally tested. Its direct estimation, as well as its relation to the urea in the urine, as Ambard's constant, as the blood urea clearance test of Van Slyke's, etc., has proved to be very valuable, being very sensitive in detecting the earliest signs of kidney disease and having a definite diagnostic significance. Clearance values above 75 per cent

of normal usually suggest no impairment of renal function. Values between 75 and 50 per cent should be considered in the doubtful range. Below 50 per cent of normal always implies decreased renal efficiency.

Ambard found out that elimination of at least certain substances is carried on by the kidneys, according to definite laws which are capable of mathematical expression, by a formula known as Ambard's coefficient or constant: $K = \frac{Ur}{\sqrt{D \times \frac{70}{wt.}} \times \sqrt{c/23}}$

where Ur is grams of urea per liter of blood, D is grams of urea excreted in twenty-four hours, $wt.$ is weight of patient in kilograms, C is grams of urea per liter of urine. The normal value of the Ambard coefficient is between 0.07 and 0.09. In impaired function with an ability of the kidney to eliminate in proportion to the concentration of urea in the blood, there is a rise in the coefficient in proportion of the degree of renal insufficiency. Values of 0.09 to 0.12 indicate slight impairment; 0.13 to 0.2, a moderate degree of impairment; and above 0.20, severe renal impairment.

1025 Story Building.

S. I. MOVITT,
Los Angeles.

LOCAL INJECTION OF PROCAIN: IN THE DIAGNOSIS AND TREATMENT OF DERANGEMENTS OF CERTAIN JOINTS

Pain is one of our most significant criteria in diagnosis. It follows that the temporary elimination of such pain by the local injection of procain has great possibilities in differentiating various disturbances of joints.

The occurrence of painful inflammatory changes, with or without calcification, in the subdeltoid bursa is often accompanied by the sudden loss of the power to initiate abduction of the shoulder, due to a reflex inhibition of the supraspinatus muscle. When the onset of symptoms is associated with injury, the diagnosis of rupture of the supraspinatus tendon is suggested. Because such a rupture, if complete, demands early surgical repair, it is imperative to distinguish actual breaks in the continuity of this tendon, from inflammatory changes in the same region. The injection of 10 to 15 cubic centimeters of one per cent procain hydrochlorid into this bursa^{1,2} will eliminate the pain and reflex supraspinatus inhibition caused by any inflammation of the bursa, and will permit immediate active abduction of the shoulder through its normal range. This active painless exercise of the shoulder overcomes adhesions in the bursa and frequently affords permanent relief from symptoms. In other cases the injection of procain into the bicipital groove, with the disappearance of pain, which formerly occurred on certain movements of the shoulder and elbow, may confirm the

suspected diagnosis of inflammation or "slipping" of the tendon of the long head of the biceps. Marked improvement or cure was obtained following the injection of procain into the bicipital groove in three out of four patients whose symptoms were localized to this region. Schulhof³ has relieved "painful shoulders" by the slow injection of 30 to 50 cubic centimeters of warm one-half per cent solution of procain into the subdeltoid bursa.

Coste⁴ prefers to inject the supraspinous and circumflex nerves with procain in the treatment of peri-articular arthritis of the shoulder. Following anatomic studies, which showed the richness of articular ligaments in sensory-nerve endings, Leriche⁵ advocated the infiltration of these ligaments with procain in functional post-traumatic articular disturbances after sprains or fractures. The anesthesia of the joints thus produced also permits their mobilization following arthroplasties or arthrotomies.

The injection of 25 cubic centimeters of one per cent procain into the region of the sacro-iliac joint, following the oral administration of three grains of sodium amytal, can be used to differentiate a sprain or arthritis of this joint from similar involvement of the lumbosacral joint, and from pure sciatic neuritis. A needle three inches long is inserted at a point over the midline of the sacrum, at the level of the two posterior superior iliac spines, and is directed laterally at an angle of forty-five degrees with the skin. By such an insertion the point of the needle passes between the lateral portion of the sacrum and the overhanging posterior superior iliac spine, and reaches the posterior margin of the sacro-iliac joint. The posterior sacro-iliac ligaments are infiltrated with procain, some of which may reach the sacro-iliac joint. Following the injection it is usually possible to manipulate the sacro-iliac joint quite freely by straight leg flexion of the hip. In addition to the relief obtained from such manipulation, some benefit probably results from the distention and stretching of the sacro-iliac ligaments due to the injection of the solution.

Doubtless many other applications of the principle of the injection of procain for diagnosis and treatment will suggest themselves.

350 Post Street.

KEENE O. HALDEMAN,
San Francisco.

¹ Schulhof, E.: Die Subdeltoidale Injection zur Behandlung der Periarthritis Humeroscapularis, Zentralbl. f. Chir., 53:1364-1366, 1926.

² Coste, M. F.: Sur les Infiltrations Anesthésiques Peri-articulaires, Bull. et mem. soc. med. d. hôp. de Paris, 49:627-630, 1933.

³ Leriche, R.: Des Effets de L'anesthésie à la Novocaine des Ligaments et des Insertions Tendineuses Peri-articulaires dans Certaines Maladies Articulaires et dans les Vices de Position Fonctionnels des Articulations, Gaz. d. hôp., 73:1294 (Sept. 10), 1930.

¹ Soto-Hall, R., and Haldeman, K. O.: Muscle and Tendon Injuries—In the Shoulder Region, Calif. and West. Med., 41:318-321 (Nov.), 1934.

² Haldeman, K. O., and Soto-Hall, R.: Injuries to Muscles and Tendons, J. A. M. A., 104:2319-2324 (June 29), 1935.

The joy of creation is so exalted that it has been called divine. Next to it is the joy of coming to know what has been wrought and thought by the most highly endowed members of the race. Through them and their achievements we discern powers and qualities latent within ourselves. The more we understand, the more we appreciate and the richer life becomes.—Leon J. Richardson.

ORIGINAL ARTICLES

THE MODERN THERAPY OF SYPHILIS*

AS ADMINISTERED AT THE UNIVERSITY OF
CALIFORNIA OUT-PATIENT DEPARTMENT

By HOWARD MORROW, M.D.

NORMAN N. EPSTEIN, M.D.

AND

LeROY K. GAY, M.D.

San Francisco

DISCUSSION by Ernest Dwight Chipman, M.D., San Francisco; William H. Goeckerman, M.D., Los Angeles; Stanley O. Chambers, M.D., Los Angeles.

IT is the purpose of this paper to outline briefly the methods of treatment used for certain types of syphilis at the University of California syphilis clinic. The treatment of syphilis has, for the most part, been concentrated in large clinics, and it is to these that the practicing physician must look for guidance as to the selection of drugs and methods to be pursued. At the University of California outpatient department all adults with syphilis are treated in clinic "L." Approximately six hundred such patients, representing the various manifestations of the disease, are treated weekly.

EARLY SYPHILIS

Early syphilis is that period of acquired syphilis which extends from the time of the appearance of the primary sore through the healing of the secondary lesions. It is during this period that the *Treponema pallida* multiply sufficiently at the site of inoculation to form the primary sore and then disseminate throughout the body to give the symptoms of secondary syphilis. Clinically, we recognize the following stages of early syphilis:

(a) Primary stage, seronegative.

(b) Primary stage, seropositive.

(c) Secondary stage, *i. e.*, the eruptive period indicating a widespread dissemination of the *Treponema pallida*.

The early period of syphilis is the golden opportunity of therapy, and offers the greatest chance of cure. From a public health standpoint, the control of early syphilis is most important, as it is in this period that the infection is easily transferred from one individual to another. As high as 86 per cent of patients properly treated in the seronegative primary stage should be cured; 70 per cent in the seropositive primary stage, and 65 per cent in the secondary stage may expect a cure. These percentages represent the statistics compiled by the Coöperative Clinics.¹ Moore² states that, with the best available treatment, the chance of cure in seronegative primary syphilis is approximately 100 per cent, in seropositive primary 95 per cent, and in early secondary syphilis

TABLE 1.—Plan of Treatment for Early Syphilis*

Day	Neosarsphenamin Intravenously	Bismuth Salicylate Intramuscularly
1	0.45 gm.	.....
5	0.45 gm.	.....
10	0.45 gm.	.....
Week 3	0.6 gm.	.....
4	0.6 gm.	0.2 gm.
5-7	0.6 gm.	0.2 gm.
8-11	.....	0.2 gm.
12-17	0.6 gm.	.....
18-19	0.6 gm.	0.2 gm.
20-25	.....	0.2 gm.
26-33	0.6 gm.	.....
34-41	.....	0.2 gm.
42-47	0.6 gm.	.....
48-57	.....	0.2 gm.
58-63	0.6 gm.	.....
64-75	.....	0.2 gm. End of treatment of seronegative primary stage.
76-81	0.6 gm.	.....
82-93	.....	0.2 gm.
94-99	0.6 gm.	.....
100-104	.....	0.2 gm. End of treatment of seropositive and secondary stages.

* Unless otherwise indicated, injections of these drugs are given once each week.

90 to 95 per cent. The term "cure" is used advisedly, and is defined as a complete eradication of all signs and symptoms of the disease with non-transmission of the infection over the period of a lifetime.

Treatment in the early period of syphilis must be continuous, and carried over a long period of time if best results are to be obtained. It is essential that the patient be impressed with this fact, as inadequate therapy may be harmful to the individual. Treatment in this period of syphilis lends itself to standardization, and the plan adopted should be rigidly followed as to dosage of drug and the time-interval of the injections. By continuous therapy is meant the uninterrupted administration of remedies until the end of treatment.

Seronegative primary syphilis should be treated for at least one and one-half years; seropositive primary and secondary syphilis should be treated for two years or more.

SEROLOGIC CONTROL

The blood Wassermann and Kahn tests may be done at the conclusion of each course of bismuth salicylate or, as is our custom, they may be done at the conclusion of the required amount of treatment for the given patient. This latter method is

* From the Division of Medicine (Dermatology), University of California Medical School, San Francisco.

Read in part before the Long Beach Branch of the Los Angeles County Medical Society, September, 1935.

TABLE 2.—Plan of Treatment for Latent Syphilis

Week	Bismuth Salicylate Intramuscularly Weekly	Mercury Salicylate Intramuscularly Weekly	Neosarsphenamin Intravenously Weekly	Potassium Iodid (Saturated Solution) By Mouth
1-12	0.2 gm.	.....	.....	1 cc., t. i. d. p. c.
13	.....	.....	0.45 gm.	.....
14-18	.....	.....	0.6 gm.	.....
19-30	0.2 gm.	.....	.....	1 cc., t. i. d. p. c.
31-35	.....	.....	0.6 gm.	.....
36-47	0.2 gm.	.....	.....	.....
48-53	.....	.....	0.6 gm.	.....
54-65	0.2 gm.	.....	.....	.....
66-71	.....	.....	0.6 gm.	.....
72-77	0.2 gm.	.....	.....	.....
78-83	REST Check blood and spinal fluid. If blood is positive and spinal fluid is negative, continue as follows:			
84-95	.....	0.1 gm.	.....	1 cc., t. i. d. p. c.
96-101	.....	.....	0.6 gm.	.....
102-107	REST Check blood. If Wassermann or Kahn are positive, continue treatment.			
108-119	0.2 gm.	.....	.....	.....
120-125	.....	.....	0.6 gm.	.....
126-131	REST Check blood. If Wassermann or Kahn are positive, continue treatment.			
132-143	0.2 gm.	.....	.....	.....
144-150	.....	.....	0.6 gm.	.....
151-162	0.2 gm.	.....	.....	.....
This marks the end of treatment for latent syphilis, whether the blood Wassermann or Kahn reactions are positive or negative. If the spinal fluid is positive, the case should be regarded as asymptomatic neurosyphilis.				

called the bloc type of treatment, and has a tendency to encourage the patient to complete the course of therapy prescribed, and further makes him less "Wassermann-conscious."

At the conclusion of treatment the blood Wassermann and Kahn tests are done at six-week intervals for two examinations. If found consistently negative, they are done at three-month intervals for the first year, six-month intervals for the second year, and then one year later. The spinal fluid is examined within three months after treatment is discontinued. If the patient is found to be physically free of any signs of syphilis, and serologically negative during this period of observation, he is considered "cured."

In the event that the blood serologic tests remain positive after the required amount of therapy has been received, the patient is treated for an additional year. Treatment is then discontinued, and if the blood serology is still positive the patient is placed under observation indefinitely. If the spinal fluid is positive after treatment has been concluded, special methods of therapy are instituted.

RELAPSE

Clinical relapse is usually the result of inadequate therapy in the early period of syphilis. It occurs in about 10 per cent of inadequately treated patients, while in the adequately treated group it is a rarity.

Neurorecurrence, or neurorelapse, requires special mention. This condition is an overwhelming invasion of the central nervous system by *Treponema pallida*, with the sudden development of an acute syphilitic meningitis, or the occurrence of a cerebrovascular accident such as a hemiplegia, a monoplegia or a paraplegia, or various cranial nerve palsies. For this condition we have employed with satisfactory results the following regimen. The patient is rapidly mercurialized with a course of twenty intramuscular injections of mercury succinimid, grains one-quarter, each given three times weekly. This is followed by a course of eight injections of neosarsphenamin, 0.45 grams to 0.6 grams. The spinal fluid should show at this time a marked reduction in the cell-count and a general improvement in the other spinal fluid findings. Treatment is continued as indicated in Table 1. Other forms of relapse may be treated as indicated in Table 1.

LATENT SYPHILIS

This phase of syphilis is the period in which all signs and symptoms of the disease have disappeared, and is diagnosed by the presence of positive serum tests or by a very definite history of the infection with inadequate therapy. It may be further divided into early latency—that is, within four years of the onset of the infection; and late latency, more than four years after the initial infection.

TABLE 3.—Plan of Treatment for Asymptomatic Neurosyphilis

Week	Tryparsamid Intravenously Weekly	Neocarsphenamin Intravenously Weekly	Bismuth Salicylate Intramuscularly Weekly	Potassium Iodid (Saturated Solution) By Mouth
12	.....	0.45 gm.	0.2 gm.	1 cc., t. i. d. p. c.
13-18	.....	0.6 gm.	.....	.....
19-24	.....	.....	0.2 gm.	1 cc., t. i. d. p. c.
25	1.0 gm.	.....	.....	.....
26-49	2.0 gm.	.....	.....	.....
50-57	.....	.....	0.2 gm.	.....
Check spinal fluid. If positive or negative, continue treatment.				
58-72	2.0 gm.	.....	.....	.....
73-80	.....	.....	0.2 gm.	.....
81-95	2.0 gm.	.....	.....	.....
96-103	.....	.....	0.2 gm.	.....
Check spinal fluid. If negative and previous test was negative, discontinue treatment. If negative and previous test was positive, continue treatment.				
104-119	2.0 gm.	.....	.....	.....
120-127	.....	.....	0.2 gm.	.....
128-142	2.0 gm.	.....	.....	.....
143-150	.....	.....	0.2 gm.	.....
If spinal fluid remains consistently positive, ten pyrotherapy treatments, consisting of fifty hours of fever over 104 degrees Fahrenheit (40 degrees Centigrade), should be given simultaneously from week 104 to week 113.				

The purpose of treatment in latent syphilis is to "cure" the patient or to prevent late complications of the disease. It is obviously poor judgment to treat a patient of advanced age because he has a positive blood Wassermann reaction if there are no clinical evidences of the disease. On the other hand, it is very much worth while to treat patients in the latent stage of syphilis who have a reasonable length of life before them.

PLAN OF TREATMENT FOR LATENT SYPHILIS

In latent syphilis, treatment should be continuous for a year and one-half, provided the drugs are tolerated well. After this time rest periods of six weeks may be given. The total length of treatment should be two to three years. Three years is considered the end-point of treatment, whether the blood serologic tests are positive or negative. A patient with a positive spinal fluid is not in the stage of latency, and should be treated as outlined for syphilis of the central nervous system.

At the conclusion of treatment, patients in the late latent stage of syphilis should be kept under observation for the rest of their lives if possible. In the event that the blood Wassermann and Kahn reactions have reversed to negative as a result of treatment, the patient should be seen yearly to check on the serum and for physical examination. It is advisable to examine the spinal fluid in this group of patients every three to five years.

Patients in the early latent stage of syphilis should be observed for three years after conclusion of treatment, and if clinically free of signs of syphilis, and serologically negative, should be regarded as "cured."

LATE SYPHILIS

Late syphilis is that period of the disease which is characterized by the development of signs and symptoms due to the formation of gummas in the various tissues. Any organ or tissue of the body may be affected by this process. This stage of syphilis may appear within a few months of the initial lesion, or, as is the rule, several years later. It is impossible to outline a plan of treatment which would be applicable to the entire group of patients with late syphilis. In general, the plan outlined for latent syphilis would be suitable for patients who present only evidences of late syphilis of the skin and mucous membranes of the mouth, anus and genitalia, of the bony skeleton, the skeletal musculature and subcutaneous tissues. However, where the cardiovascular system, the nervous system, the abdominal viscera, and special organs, such as the eye, are involved, the plan of treatment must be changed to meet these situations.

NEUROSYPHILIS

Involvement of the central nervous system is probably the most frequent and most important complication of late syphilis. It is found in about 25 per cent of all patients in this stage of the disease. The introduction of trypanosol in 1917 by Heidelberger, and fever therapy by von Jauregg in 1919 have been outstanding contributions to the treatment of all forms of resistant syphilis of the central nervous system. They are, however, of particular value in the treatment of the parenchymatous forms of neurosyphilis, such as paresis, taboparesis, and tabes dorsalis.

CLASSIFICATION OF NEUROSYPHILIS

Late neurosyphilis may be classified as follows:

(a) Asymptomatic neurosyphilis; that form in which the only evidence of neurosyphilis is the presence of a positive spinal fluid. This may be compared with the latent type of systemic syphilis.

(b) Meningeal and meningovascular neurosyphilis.

(c) Parenchymatous neurosyphilis; that is, general paresis, taboparesis, and tabes dorsalis.

As these various types of neurosyphilis do not lend themselves to one plan of treatment, an outline of therapy for asymptomatic neurosyphilis is presented. Special indications in the other forms of neurosyphilis will be pointed out later.

GENERAL PARESIS

In general paresis with clinical evidence of mental deterioration, tryparsamid therapy should be instituted at once. If the mental deterioration progresses unchecked by this treatment, or if the deterioration is marked, pyrotherapy or artificial fever therapy should be instituted simultaneously with tryparsamid therapy. The course of pyrotherapy may be repeated within six months or one year, if deemed necessary. Tryparsamid may be given in two- to three-gram dosage intravenously for a series of fifteen to twenty-five injections. This drug has earned well-deserved recognition as the most effective remedy in the treatment of neurosyphilis. It is tolerated very well by the patient. The most important toxic effect is upon the optic nerve. Blindness has been reported after its use. This should not deter one from employing this drug, as optic complications of a serious nature are very unusual and can be prevented in a large measure by careful examination of the fundi and visual fields before treatment is begun, and by checking the eye-grounds at frequent intervals. Subjective symptoms of visual disturbances precede objective changes, and by discontinuing the drug serious harm can be prevented. Visual disturbances following tryparsamid therapy usually occur within the first five to ten injections of the drug.

Tryparsamid courses are alternated with courses of bismuth salicylate, as shown in Table 3.

PYROTHERAPY

The introduction of artificial fever for the treatment of general paresis and other forms of resistant neurosyphilis has changed the outlook for many of these patients from one of complete hopelessness to that in which an arrest of their disease may be expected.

Malaria therapy, as introduced by Wagner von Juaregg, has been dramatic in its effects upon general paresis. During recent years other methods of producing artificial fever have been introduced. As the therapeutic effects are comparable where temperatures of 104 to 106 degrees Fahrenheit are developed and maintained for several hours, it is generally agreed by most observers that the essential factor in this treatment is the elevation of body temperature rather than any specific effect of the method used.

We employ the blanket method of inducing artificial fever, and have found it practical and therapeutically effective. The technique of this procedure has recently been described.³ Where the term "pyrotherapy" is employed in this paper, it refers to this type of artificial fever therapy. A course of pyrotherapy is ten weekly treatments, each consisting of five hours of temperature over 39.5 degrees centigrade (103 degrees Fahrenheit).

TABOPARESIS AND TABES DORSALIS

Patients with taboparesis should be treated as those with general paresis.

In tabes dorsalis the plan outlined in Table 3 should be followed. It has been found that pyrotherapy is particularly effective in relieving the severe pains and crises of this type of syphilis, and may be employed where indicated.

LUMBAR PUNCTURE

Examination of the spinal fluid should be done in all patients who have, or have had, syphilis, no matter how early the case had been diagnosed nor how intensively it had been treated. Lumbar puncture may be done for diagnostic purposes or as a guide in therapy.

In early syphilis, lumbar puncture should be done at the conclusion of treatment, as involvement of the central nervous system is usually controlled by the treatment advised for this period.

In latent syphilis, lumbar puncture should be done during the first rest period.

In late syphilis, lumbar puncture should be done after one year of treatment if there are no clinical evidences of neurosyphilis. If such signs are apparent, lumbar puncture should be done before treatment is instituted, and repeated at intervals of six months to a year as a guide to therapy.

COMMENT

Due to lack of space, we have not discussed the toxic reactions which are met with as a result of antisyphilitic therapy with drugs. We have also omitted to outline a plan of treatment for certain types of syphilis, such as cardiovascular syphilis, hepatic syphilis, syphilis in pregnancy, etc. We have not attempted to include in this report the therapeutic results obtained by the plans of treatment outlined. However, we have found them effective and satisfactory.

The success of a plan of treatment for a given case of syphilis will depend on the skillful use of the drugs advised, and rigid adherence to the plan adopted. Every precaution should be taken to make the treatment "smooth"—that is, without serious reactions. Irregular treatment, whether due to a lack of coöperation on the part of the patient or as a result of toxic reactions, is always unsatisfactory.

In early syphilis the intensive use of the arsenophenamins is essential, as these drugs are highly treponemocidal. Bismuth and mercury, the resistance-building drugs, are less important, but nevertheless must be used in conjunction with the arsenicals. In this stage of the disease, particularly previous to the appearance of the secondary

eruption, a cure is attempted before the patient has had an opportunity to develop his own resistance mechanism to its highest degree against the infection. Therefore, inadequate therapy leaves the patient helpless against invasion by the *Treponema pallidum*. This accounts for the frequency of clinical relapse in those patients who have had only a few injections of neoarsphenamin and no other treatment.

In latent and late syphilis the resistance mechanism of the patient is developed to a high degree, and treatment is altered accordingly. Therapy is begun with a long course of bismuth, combined with potassium iodid by mouth. This accomplishes a gradual therapeutic effect without disturbing too abruptly the relationship between the host and the parasites. Here the arsphenamins are less important, and are given in short courses between those of the heavy metals.

Invasion of the various organs of the body occurs during the early period of syphilis when the *Treponema pallidum* is disseminated. Therefore, treatment should be as early as possible. The final therapeutic effect will depend upon the amount of destruction produced by the disease before therapy was instituted.

SUMMARY

A plan of treatment has been presented for the treatment of early syphilis, latent syphilis, and certain types of late syphilis.

The cause and treatment of clinical relapse have been discussed.

A plan of treatment for asymptomatic neurosyphilis has been outlined.

The use of tryparsamid and fever therapy in general paresis, taboparesis, tabes dorsalis and other forms of resistant syphilis of the central nervous system has been emphasized.

The indications for lumbar puncture in the various stages of syphilis have been stated.

University of California Hospital,
San Francisco.

REFERENCES

1. Stokes, J. H., Cole, H. N., Moore, J. E., O'Leary, P. A., Wile, U. J., Clark, T., Parran, T., and Usilton, L. J.: (b) Section II. Results of Treatment in Early Syphilis, *Ven. Dis. M. J.*, 13:207, 1932.
2. Moore, J. E.: *The Modern Treatment of Syphilis*. Charles C. Thomas, Baltimore, 1933.
3. Epstein, N. N., and Cohen, Maurice: *The Effects of Hyperpyrexia Produced by Radiant Heat in Early Syphilis*, *J. A. M. A.*, 104:883-889 (March 16), 1935.

DISCUSSION

ERNEST DWIGHT CHIPMAN, M.D. (2000 Van Ness Avenue, San Francisco).—The authors of this paper are to be congratulated upon the comprehensive and, at the same time, the concise manner in which they have covered their subject.

The necessity for a definite, standardized system of treatment is emphasized throughout, and there are numerous practical reminders such as the statement that a patient with a positive spinal fluid is not to be considered in the stage of latency.

It may be observed that, in treating syphilitic patients in large groups, there lurks always the danger of relying exclusively upon specific remedies to the neglect of the individual himself. We may believe that, by the injection of bismuth, we are building up resistance; but we must

not neglect the consideration of such allied factors as secondary anemia, kidney function, foci of infection, etc., which also are of importance in this connection. The authors have doubtless regarded this as understood.

✱

WILLIAM H. GOECKERMAN, M.D. (1216 Roosevelt Building, Los Angeles).—Doctor Morrow and his associates have given us a splendid outline of the routine treatment of the various phases of syphilis. I agree heartily with what has been said, and feel sure that if their teachings are carefully followed, treatment will be excellent and the patient receive such benefit as modern medical treatment has to offer. I should like to emphasize a few points, however, which I do not think usually get the attention that they deserve. Evidently the man in general practice has great difficulty with deciding on further treatment in patients who have no symptoms, but a persistently positive Wassermann reaction. I believe no definite rule can be laid down in cases of this type; but it can be said that not the Wassermann but the patient should be treated. If the amount of treatment has been reasonably adequate according to modern standards, and there are no clinical findings, there is no necessity to try to reverse the Wassermann reaction by intensive treatment. It should be noted, however, that when I say no clinical findings, I mean that the investigation must be a competent one, and this cannot be carried out by one individual. This phase is usually termed the latent phase, but cannot be spoken of by this term without an examination of the spinal fluid. The possible invasion of the central nervous system should be recognized as early as possible after the early symptoms have subsided, as it may be highly desirable to give this phase of the infection special attention. If the invasion is associated with clinical signs, the immediate approach may become an important one. Should the fluid point to a "paresis sine paresi," I do not believe that the patient should be treated with tryparsamid for any length of time. It is at this time that I think the very best results are obtained with pyrotherapy. In the event that suggestive evidence of paresis has presented itself, tryparsamid should not be used at all unless it has been determined that the patient will not tolerate pyrotherapy. The crucial moment is often passed at this time by dilatory tactics with one of the easier methods of treatment, such as tryparsamid. If the patient does not stand pyrotherapy, then tryparsamid should be given a thorough trial in the hope of arresting the process. In other words, I consider tryparsamid therapy very definitely inferior in therapeutic results to malaria therapy in paresis. Personally, I am as yet unconvinced that any form of pyrotherapy can be substituted for malaria therapy. I should like to call attention to the fact that Wagner von Jauregg for many years experimented with many substances such as tuberculin, mixed staphylococcus, streptococcus vaccines, and protonucleins, in an endeavor to get results with fever therapy, but was never satisfied with any of these until he employed malaria. My own experience would also indicate that, while some results may be obtained, fever therapy in general does not approach malaria therapy in efficacy. The pyrotherapy produced by mechanical methods will have to be in the experimental stage for a number of years to come at least. I do not believe that the therapeutic results from pyrotherapy are the direct effect of the fever, but rather an indirect effect on the immunity mechanism. This is very strongly suggested by the facts that, following malaria therapy, the spinal fluid findings may show a very definite improvement and yet gummatous lesions may appear on the skin or elsewhere. In addition to this, the serologic findings on the spinal fluid are not changed rapidly, but only very gradually, sometimes taking as much as two years before reversal has occurred, no matter whether other antisyphilitic treatment is subsequently given or not.

✱

STANLEY O. CHAMBERS, M.D. (1260-62 Roosevelt Building, Los Angeles).—The immensity of Doctor Morrow's material from clinic "L" makes possible observational and statistical conclusions of a most accurate nature. It is

through such agencies that the modern therapy of syphilis can adequately be disseminated.

Early syphilis is no doubt that phase of the disease, preceding extensive tissue involvement, when clinical cure is a concrete possibility. Its identification via the Kraian stain or darkfield apparatus is comparatively simple. Treatment, likewise, is readily administered, and with a moderate knowledge of reaction of organisms and host, the use of arsphenamin, bismuth, and mercury can be a well-systematized series of intravenous and intramuscular administrations. Reaction is the exception rather than the rule if methods of preparation, choice of drugs, care of administration and an always active preparedness for accidents, is carefully observed. Serologic observation still remains an important guide-post in the determination of treatment indications and the ultimate disposition of therapy.

The spinal fluid examination, early in the plan—the eighteenth week—offers a prognostication which may well alter a fixed procedure of treatment. Patient cooperation to the conclusion of treatment obviously is necessary, for relapse of all types is almost in proportion to regularity.

TOLERANCE TO ALCOHOL: ITS MECHANISM AND SIGNIFICANCE*

By EMIL BOGEN, M.D.
Olive View

DISCUSSION by C. H. Thienes, M.D., Los Angeles;
Henry W. Newman, M.D., San Francisco.

IT has long been known that different individuals are not all equally affected by drinking the same amount of alcoholic liquors.¹ Such differences in susceptibility, or "tolerance," to alcohol may be of great practical, as well as of scientific importance. To the drinker himself, it becomes increasingly important, as has been suggested, to learn how to "carry his liquor," to drink within his own limitations, and to avoid unpleasant consequences of the drug.² The deliberate use of methods of delaying absorption,³ of increasing excretion,⁴⁻⁷ and of accelerating destruction of the alcohol imbibed⁸⁻¹⁰ may at times become matters of considerable therapeutic value. The extent to which alcohol might act as a food, and the conditions under which its energy might be useful, are still moot questions.^{11,12} Public officials are more and more concerned with the part played by alcohol in the causation of traffic accidents,¹³⁻¹⁶ and the determination of the influence of alcohol in suspected individuals.¹⁷⁻²⁷ Intelligent consideration of all of these problems requires an understanding of the physiology of alcohol,^{28,29} and the factors affecting tolerance to it.

EFFECTS OF ALCOHOL ON VEGETABLE AND ANIMAL FORMS

The effects of alcohol have been studied on a host of different vegetable and animal forms.⁴⁰ In general, it appears that unicellular organisms will withstand somewhat higher concentrations of alcohol than can be borne by multicellular types. Concentrations up to two per cent are generally reported well tolerated by protozoa, bacteria, and by the sperm and ova of numerous species, including the sea urchin, fundulus, frog, hen, fruit-fly, and guinea pig. On the other hand, effects

are noted in multicellular forms as low as 0.01 per cent, and mammals are generally killed before the alcoholic concentration in their tissues reaches one per cent.

Where protective mechanisms prevent the alcohol from actually entering the tissues, much higher concentrations in the environment may, of course, be borne. Thus spores may resist absolute alcohol for considerable periods, frogs have been shown to survive immersion in eight per cent alcohol because of impermeability of their skins to the passage of the alcohol, and there is no danger from the skin-absorption in an alcohol bath, although deaths from inhalation of the alcohol fumes under such conditions have been reported.

Under similar conditions of exposure to alcohol, different individuals of the same species may show differences in behavior. This often appears to be due more to varying concentrations of the alcohol actually penetrating into the individuals concerned than to any true differences in individual resistance, as subsequent tests of the same individuals or their progeny may fail to show such behavior.

For example, we have found at Olive View that the fruit-fly, *Drosophila melanogaster*,⁴¹ is usually killed, or the eggs fail to hatch, the larvae to pupate, or the pupae to emerge, if placed in a jar with media containing more than 15 per cent of alcohol. If the few survivors at this concentration are bred, they are found to be, if anything, even more susceptible to the alcohol than the controls, and we have thus far been unable to develop a strain of fruit-flies with increased tolerance against alcohol applied in this manner. (See Table 1.)

TOLERANCE AND HABITUAL USE

A distinction must be made between tolerance and habitual use. Total abstainers vary greatly in their reaction to the same dose of alcoholic liquors, some never attain any increased ability to withstand the drug, and instances of chronic drunkards who are easily intoxicated may be encountered.⁴² In fact, it has been suggested that the constant excessive use of alcohol may lower the tolerance formerly possessed. Both clinically and experimentally,⁴³⁻⁴⁵ it has been repeatedly observed that habitual users of alcohol are apt to have a high tolerance for it. This is not always the case, however, and some of the discrepancies in the literature may be due to a failure to recognize this fact.^{46,47}

ENDOGENOUS ALCOHOL

It has long been alleged that there is a certain amount of alcohol preformed in the tissues of mammals, including man,⁴⁸ arising either in the process of digestion, in the metabolism of carbohydrates, or in other ways.⁴⁹ That a volatile-reducing substance is present in small amounts is generally observed,⁵⁰ and it has been reported that pure anhydrous ethyl alcohol has been isolated from the blood and tissues of man and dogs.⁵¹ A few workers have failed to find this alcohol-like substance, and some have suggested that it may be a postmortem product, while few of the

* Read before the Pathology and Bacteriology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

TABLE 1.—Tolerance to Alcohol in Fruit Flies

TABLE 1.— <i>Tolerance to Alcohol in Fruit Flies</i>							
Per cent of bottles with living off-spring	Per Cent of Alcohol in Media						
	0	10	12	14	16	18	20
Normal flies	100	100	100	85	50	15	0
Progeny of survivors of 17 per cent alcohol	100	100	85	66	50	0	0

workers who have reported it agree on the amount obtained. At any rate, the figures reported, a few milligrams per hundred cubic centimeters of tissue, are far too small to produce any discernible effect, or to interfere in the investigations of the amounts present following administration of clinical doses.

MECHANISMS OF TOLERANCE

There are various mechanisms by which tolerance to a drug may be established. The simplest form is that of simple lack of absorption, such as is reported for the arsenic eaters of Styria, where the poison, harmless if taken by mouth, still remains toxic if given hypodermically. On the other hand, we find the complex immunity displayed against the diphtheria toxin by Schick-negative individuals, who possess, in the antitoxin in their blood and tissues, a true antidote against the poison. Immunity to caffeine is said to consist mainly in the increased ability of the habitual user to destroy large amounts of the alkaloid, while immunity to antigens in allergic conditions seems to depend upon a loss of reactivity of the individual cells to its presence. Immunity to lead poisoning, on the other hand, appears to come with a tendency to alkalosis, leading to the precipitation of the lead in inactive deposits in the bones. Much remains to be learned regarding all forms of tolerance, and it is probable that multiple factors are frequently concerned.

In the case of alcohol, every possible explanation for the existence of tolerance—that is, the ability of some individuals to drink more than others without showing as much effect—has been proposed, at some time, usually with assurance that this is the sole or most important mechanism concerned. Thus the failure to manifest symptoms following ingestion of alcoholic liquors has been attributed to the factors affecting absorption of the alcohol, to its more rapid or complete destruction within the body, or its more complete elimination, or to an increase in the ability of the individual cells to withstand the drug. Further investigation of this problem is obviously still required.

TABLE 2.—The Distribution of Alcohol in a 200-Gram Guinea Pig an Hour After the Oral Administration of 0.3 Grams of Alcohol.

Stomach	0.12 per cent
Blood	0.12 per cent
Liver	0.11 per cent
Bladder	0.09 per cent
Urine	0.09 per cent
Muscle	0.07 per cent
Brain	0.05 per cent
Spleen	0.04 per cent

ABSORPTION OF ALCOHOL

Early observers noted that alcohol was quickly absorbed,⁵² and could be readily detected in practically all of the tissues, fluids and excretions of the body.⁵² Accordingly, it was stated that the alcohol rapidly diffused throughout the body in nearly equal concentrations.⁵⁰ More precise determinations have since shown that this generalization is not entirely accurate,^{5,53} but for most practical purposes it is a fairly reliable rule.

The differences in the solubility of alcohol in various tissues, however, leads to a certain amount of differences in the concentrations finally developed when the diffusion has reached equilibrium. Alcohol is more soluble in the phospholipins of the brain, and less soluble in the bone and cartilage, than in the blood, and so such differences might be expected as are, in fact, actually encountered; but the differences are so slight that they are usually detected only by the more precise methods of determination.

The amount of alcohol consumed, divided by the weight of the body, would give, accordingly, the maximum concentration which we might expect to develop. Since increase in weight is not accompanied by proportional increases in the size of the brain, the volume of blood, and other tissues in which the alcohol is to be found in higher concentrations, it may be found that the values observed are proportional to the body surface, the blood volume, or the two-thirds power of the weight, rather than to the total volume.⁵⁴ There is quite a large individual difference in different animals in this respect, depending perhaps on their anatomical composition as well as upon their state of tolerance, so conclusions should not be drawn from too small a series.⁵⁵

DISTRIBUTION OF ALCOHOL IN THE BODY TISSUES AND FLUIDS

The temporal lag in the distribution of alcohol through the various tissues and fluids of the body has given rise to many differences of opinion, much of which is based upon misapprehension of the mechanisms involved. The alcohol imbibed is at first, naturally, found in highest concentration in the stomach and intestinal contents;⁵⁹ then it goes to the liver and thence into the general blood stream where, owing to its relatively lesser solubility in the corpuscles, it reaches a higher level in the plasma than in the whole blood.⁴² It then diffuses gradually into other tissues, fluids and excretions, at variable rates, depending upon the richness of the blood supply, and the chemical and physical composition of the tissue. (See Table 2.) Lower figures are found both in bony and in fatty

tissues, and the former is readily explainable by the low solubility of alcohol in bone. The latter may depend partly on lower solubility in the particular types of fats so deposited, as contrasted with the phospholipids of the brain, and partly on the poorer blood supply to such tissues, resulting in slower penetration, since most of these studies were made within a few hours of absorption. Perhaps studies made at a later time might show a different result.

Alcohol apparently reaches the brain quite early, and reaches a slightly higher concentration in brain tissue than in the blood, probably due to its greater solubility. It also, however, appears to remain in the brain for a longer time than in the blood and other tissues, partly for the same reason and partly, perhaps, because it is not destroyed in brain tissue as it gradually is in the muscles and liver, and so lessens only by diffusing back into the blood stream.

The concentration of alcohol in the spinal fluid rises much more slowly than in the blood or in the brain,⁵⁶ as it diffuses or is secreted into the spinal fluid apparently mainly from the region of the brain, and not along the cord, as has been clearly shown in a case of spinal block.⁵⁷ Early examinations, accordingly, show a much lower level in the spinal fluid than in the blood or brain; but as the alcohol remains in the spinal fluid even longer than in the brain, it later exceeds that in the blood and for a time may be much closer to the levels found in the brain.^{58,59}

The alcoholic content of arterial blood is, soon after absorption, higher than that of venous blood, as some of the alcohol is being removed from the blood by diffusion into the tissues. Later the alcoholic content of the venous blood may be found to be higher than that of arterial blood, as the alcohol again diffuses back into the blood stream from those tissues in which it is not being destroyed. Capillary blood appears to behave like arterial blood in this regard.⁶⁰

The alcoholic content of the urine reflects that of the arterial blood at the time it is secreted, which is, at an early time, rising, and later falling in concentration.⁴² Since the urine collected was always secreted at a somewhat earlier period, it is obvious that at an early time after imbibing alcohol, the concentration in the urine would be lower, and at a later time higher, than that in the blood at the time it is voided.⁵⁵ In general the urinary alcohol is a little higher than that of the blood, as the alcohol is slightly more soluble in the urine than in blood plasma.⁵⁴ Any figure given for the ratio between the alcoholic content of the blood and that of the urine must take into account the fact that this ratio is a changing one, because of the mechanism of secretion, and cannot be represented under different conditions by the same fixed figure.⁸⁴

The alcoholic content of the expired air is the result of diffusion of alcohol from the blood and pulmonary tissue into the alveolar air, and to a lesser extent into the air in the dead space of the lungs. This is a result of the vapor pressure of the alcohol in the blood and tissues, and is, accord-

ingly, proportional to the alcoholic concentration of the mixed blood passing through the lungs.⁶⁰ This appears to be closer to the arterial than to the venous blood concentration, which are not, as has been shown, exactly parallel.⁵⁹ Increased respiratory volume appears to lead to an increase in the amount of alcohol lost by this channel without significantly changing the concentration of alcohol found in the expired air.⁴ Similarly, diuresis or increased urinary excretion seems to increase the amount of alcohol lost in that manner, without changing the concentration of alcohol in the urine.⁶

The alcoholic content of the saliva has also been shown to be a function of the alcoholic content of the blood. Alcohol may also be found in the milk, sweat, and other excretions,⁸² but measurements of the relative concentrations in these fluids, as well as in the amniotic fluid in pregnancy, are less readily available.

ALCOHOL CONCENTRATIONS IN THE BLOOD

Following the ingestion of alcohol, the concentration found in the blood rapidly rises to a peak, usually within an hour, remains at about that height for a variable period of time—the so-called Grehant plateau—and then slowly falls. The rate of fall was found by most observers to be rather constant; that is, an equal drop is observed during equal intervals of time, irrespective of the initial concentration at the time. This has been interpreted as representing a fixed limit to the ability of the body to oxidize alcohol, independent of the amount present.³ As a result, it has been believed, for example, that the administration of ten grams of alcohol every hour would lead to just as much alcohol oxidation in the body as the administration of ten times that much every ten hours, without the obvious signs of alcoholic intoxication that develop from the larger single dose.

Recently it has been suggested that this apparently constant rate of fall is an artefact, due to the fact that a constantly decreasing amount of absorption of alcohol is accompanying a constantly decreasing amount of destruction, and that, in fact, the rate of oxidation of alcohol within the body is a function of the concentration; in other words, that a larger amount is burned after a single large dose than after the same amount divided in repeated dosage. It was asserted that if the alcohol were given intravenously the rate of decline in concentration in the blood would be a definite function of the concentration itself, and experiments were performed which appeared to give this result.⁶¹ Since this is the type of curve obtained following the administration of acetone, ether, chloroform, and other similar agents, it appeared, *a priori*, quite probable, and experiments were accordingly instituted at Olive View to confirm these findings. (See Chart 1.)

Somewhat to our surprise, however, the experiments here reported did not yield these results. Even after intravenous injection of varying amounts of alcohol, the concentrations of alcohol in the blood appear to fall at a steady rate, in a straight line, without the slowing that was pre-

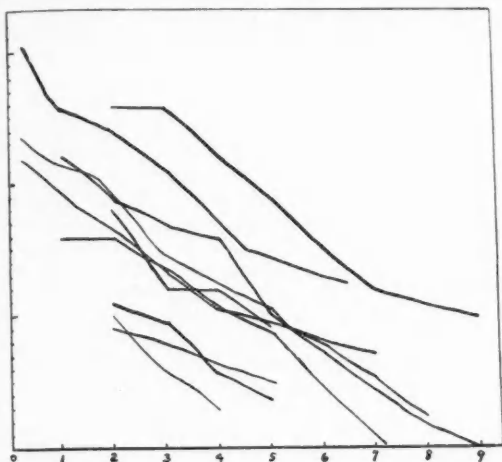


Chart 1.—Olive View experiments. The concentration of alcohol in the blood of rabbits after intravenous administration. (The horizontal figures represent hours, the vertical mg. alcohol.)

dicted. Observations made within the first hour, it is true, did show a rather rapid drop before this steady rate was achieved,⁶² but this rapid drop appeared to occur both at low levels and at high ones, immediately after injection, and the rate then assumed the constant form previously described following oral administration. (See Chart 2.) We must, therefore, again examine the problem to see if the recently proposed theory of declining oxidation of alcohol with lowered concentration in the blood is correct.

In the first place, the absorption of alcohol from the gastro-intestinal tract has been found, by a number of investigators,⁶³ to take place quite rapidly, most of it being absorbed within half an hour, and practically all within two hours. There are a few experiments that suggest that very high concentrations of alcohol in the blood stream tend to slow the rate of absorption;⁶⁴ but there is nothing to indicate that the absorption may continue to an appreciable extent for more than two hours, at least under ordinary conditions. Of course, the presence of large amounts of water or other substances in the gastro-intestinal tract, especially lipids, such as would occur after taking dilute alcohol, or after a meal, would delay absorption,^{3,65} as would also excitement, fever,⁶⁶ and other conditions slowing the splanchnic circulation; but these were absent in most investigations.

The fact that observed graphs of the alcoholic content of the blood show a continuous straight line for many hours after the taking of alcohol cannot, then, be explained on the supposition that the alcohol continues to be absorbed throughout this entire period.

On the other hand, it has been shown that the diffusion of alcohol from the blood into the tissues shows a distinct lag. The peak or highest concentration of alcohol in the spinal fluid, for example, may not occur for as much as two hours after the highest concentration is reached in the blood stream.⁶⁷ It is apparent, therefore, that a large part, if not all, of the initially more rapid fall

found following intravenous injection of alcohol may be the result of this process of diffusion into the tissues, rather than a true oxidation or destruction of the alcohol.

The persistence of a small amount of volatile-reducing substance in the blood, becoming asymptotic with the base line in the equations and curves recently proposed, may represent, perhaps, rather the endogenous reduction observed with the method used, as such persistence of alcohol in the blood hours after it has reached a very low level in the blood (under 0.05 per cent) has not been observed by other workers.

The analogy with ether, chloroform, acetone, etc., which give the falling rate of decline in the blood stream, is misleading, because in these cases the decline is due mainly to excretion, which is a simple physical process obviously proportional to the concentrations present,⁶⁷ and does not involve the oxidation mechanisms which are required in the case of alcohol.

OXIDATION OF ALCOHOL IN THE BODY

It may be interesting in this connection to recall that although alcohol is undoubtedly oxidized in the body, yielding heat, carbon dioxide and water, little is known of the manner in which this oxidation takes place, and the intermediate stages in the process, usually assumed to be acetaldehyde and acetic acid, have not been actually proved. It has been pointed out that these intermediates are, themselves, usually not entirely oxidized and destroyed in the body, but are rather excreted in large part, and studies of ketolysis and of effects on nitrogen metabolism have indicated that ingested alcohol behaves more like ethylene glycol than like acetaldehyde in these regards.⁶⁸ Further study of this problem is obviously needed. It would appear, however, that the form of the fall in concentration of alcohol in the blood might be better compared with that of some other substance, which is also slowly but nearly completely oxidized, like galactose or ethylene glycol, rather than with the more volatile substances of the anesthetic class which are, for the most part, ex-

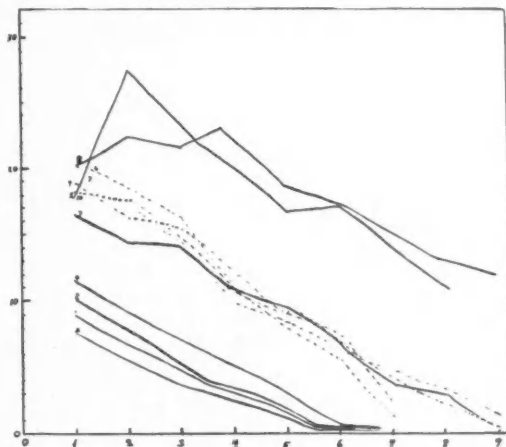


Chart 2.—Olive View experiments. The concentration of alcohol in the blood after oral administration. (The horizontal figures represent hours, the vertical mg. alcohol.)

creted rather than oxidized. The rate of oxidation of glucose, by the unicellular algae-Chlorella, appears to be independent of the concentration of glucose present over a rather wide range.⁶⁹

There is, however, a small amount of alcohol excreted, and this may well be expected to follow a curve similar to that of the excretion of the other related substances; that is, with greater excretion, both in the expired air and in the urine, with the higher concentrations in the blood stream. To this extent a deviation from the straight line-fall in the alcoholic concentration of the blood might be expected; but this, at most, is but a minor effect.

Every possible explanation for the existence of tolerance to alcohol, that is, the ability of some individuals to drink more than others, without showing any more effect from it, has been invoked by at least one worker in the field. The commonest lay notion is that the habitual use of alcohol leads to an increased power of all of the tissues of the individual to withstand the drug. It has been suggested that the existence of endogenous alcohol accounts for the existence of a certain amount of tolerance in all of us, and that the continued use of alcohol is to be encouraged, therefore, as a means of strengthening the entire body, particularly against alcohol, but by inference against other injuries as well.

There is practical unanimity of scientific opinion that this is not the case. The accumulated records of literally thousands of instances where the signs and symptoms of alcoholic intoxication have been correlated with the concentration of alcohol in the blood and tissues have conclusively shown that they go hand in hand.¹⁵⁻³⁷ Not one instance has been reported where evidences of alcoholic intoxication could be elicited, even with the finest instruments, when the concentration of alcohol lay below 0.01 per cent; not one case was found where ordinary clinical signs of drunkenness were shown where the concentration of alcohol lay below 0.1 per cent; not one person was observed who lived long enough to attain a concentration of 1.0 per cent. Although widely varying amounts had been consumed in order to bring them up to such concentrations, the symptoms observed in the individuals examined *ran pari passu* with the concentration of alcohol in the blood, brain, breath or other material examined.

It is true that a few studies made of habitually heavy users of alcohol have shown higher concentrations in the blood than in abstainers;⁴⁶ but these were, for the most part, individuals who had been incarcerated for suffering from the effects of alcohol, and so probably, despite their long use, had failed to develop tolerance to the drug, but had, on the contrary, been exceptionally susceptible. It has even been suggested that excessive use may itself lead to a loss of tolerance to alcohol.

In some studies slight discrepancies were noted between the concentrations observed and the symptoms described,³⁴ but the differences were generally slight, and often to be explained by the peculiarities in the distribution of alcohol or in the method of making the determinations.

It has also been observed that at the same height of the alcohol in the blood during the period of its fall the intoxication is less marked than when it was rising.³ This is restricted to a small range of variation and may be due to lowered reactivity following the drug; so that, for example, an individual who is voluble while becoming intoxicated may be silent while sobering up, or to some other psychological mechanisms, rather than to a true "acute tolerance" resulting from the higher level.

In general, it is a fairly safe conclusion that the effects of alcohol as manifested are proportional to the concentration of alcohol in the blood, brain and other tissues, and that the mechanisms of tolerance, therefore, must be concerned with lowering this level, rather than with increasing the ability of the tissues to withstand it.

ALCOHOL IN THE BLOOD OF HABITUÉS AND ABSTAINERS

The failure of the alcohol to reach as high a level in the blood of habitués as in abstainers may be considered, theoretically, to result (1) from destruction in the gastro-intestinal tract before absorption takes place; (2) from slowing in absorption from the gastro-intestinal tract or retarded passage into the general circulation; (3) from increased oxidation in the liver before reaching the general circulation; and (4) from storage somewhere in the body, removing it from the circulation, as well as (5) from more rapid oxidation or destruction in the body, or (6) more rapid excretion in the expired air, urine, etc. Each of these possibilities has been advanced by some workers, and ignored by others. A review of the observations thus far reported, and of a few experiments performed at Olive View to clarify points remaining doubtful, may help to evaluate their relative importance.

The hypothesis that the gastro-intestinal tract of alcoholic habitués contains enzymes, bacteria or other agents capable of oxidizing or otherwise destroying alcohol, or that such agents, present in the normal gastro-intestinal tract, are increased or given increased time to act in the case of alcoholics, appears quite ingenious and would give a very simple explanation for many of the phenomena observed. Unfortunately, no direct evidence of such phenomena can be obtained. Although it has been shown that alcohol introduced rectally or into the colon is very rapidly absorbed, the weight of evidence indicates that on ingestion the alcohol is practically entirely taken up in the stomach and small intestine, and that none remains to reach the large intestine.

The bacterial flora of the small intestine would not, ordinarily, be expected to be sufficiently abundant or varied to give rise to much effect on the alcohol that reaches them. On the other hand, no enzymes capable of destroying alcohol have so far been reported as occurring naturally in the digestive secretions in man or animals. It is possible, perhaps, that absorption of alcohol in some tolerant individuals would be so delayed that it would not take place until some of the alcohol had reached the cecum and large intestine, and that bacterial decomposition of the alcohol would

TABLE 3.—Average Amount of Alcohol Destroyed Per Hour by Incubation With One Gram of Normal Guinea Pig Tissue.

Heart	0.29 mg.
Muscle	0.27 mg.
Liver	0.25 mg.
Intestine	0.05 mg.
Stomach	0.00 mg.

here occur; but the extent and frequency of such an occurrence would not be expected to be of clinical significance. Experiments performed at Olive View showed that the normal contents of the gastro-intestinal tract of guinea pigs and rabbits do not cause the destruction of perceptible amounts of alcohol. (See Table 3.) Such experiments should be repeated, using the contents of the various parts of the gastro-intestinal tract of persons and animals known to have a high tolerance for alcohol, to rule out finally any suspicion that this mechanism might, in some instances be responsible for a part, at least, of the tolerance observed.

ABSORPTION OF ALCOHOL FROM THE INTESTINAL TRACT

Delay in the absorption of the alcohol from the intestinal tract has been inferred from the observations which showed that the concentration of alcohol in the blood of habitués reached its maximum at a later time than did that in abstainers.⁷⁰ Mere delay in absorption, while oxidation of the alcohol absorbed had continued at the usual rate, would then account for the fact that this later peak would be reached at a lower level.³⁹ The fact that the rate of reduction in the alcohol in the blood thereafter appears to run parallel with that of abstainers would tend to support this suggestion,⁵⁵ and the fact that measures which are known to retard the absorption of alcohol from the gastro-intestinal tract, such as dilution, admixture with or preceding by food, especially of fatty materials, excitement, disease, etc., have a similar effect on its concentration in the blood, may lend further support to this suggestion.³

Whether this delay in absorption is the result of functional or organic changes in absorption and secretion from the gastro-intestinal tract, in the retardation of the splanchnic circulation, or from organic changes in the mucous membranes resulting from alcoholic gastritis or enteritis, or from alcoholic hepatitis slowing the blood supply and the passage of the alcohol in the blood through the liver, has not been shown. The failure to find increased amounts of alcohol in the gastro-intestinal contents of habituated animals⁴⁸ suggests that it is not simple delay in removal from the intestinal lumen, but that, perhaps, the alcohol may be held in the tissues of the gastro-intestinal tract itself.

Such a "binding" of the alcohol in the tissues of the intestine has been reported to occur in isolate loops following the rise in the alcoholic content of the blood,⁶⁴ and might be possible in individuals tolerant to alcohol, but no further data on this supposition is available. Changes in the

chemical and physical composition of the mucosa, such as the deposition of fats, for example, might possibly act in this manner, as might also slowing in the circulation; and similar effects might be noted in a liver damaged by previous alcoholic excess, but this is still merely conjectural in the absence of specific observations.

The ability of surviving liver tissue, either minced or in perfusion experiments, to destroy alcohol, has been reported,⁷⁴ and it has been suggested that an increase in such power might occur in instances of "tolerance." Although such action has not been observed by some workers,⁷⁵ experiments on normal animal tissues at Olive View have shown that there is, indeed, a progressive destruction of alcohol incubated in the presence of living liver tissue. (See Table 3.) The rate observed, however, little more than that found in the entire body, would be insufficient to account for the large amounts that must be so cared for if this were the main mechanism of tolerance, and the respiration experiments, which show that the respiratory quotient continues to be depressed for a long time after the ingestion of alcohol,⁷³ indicate that such increased destruction during the stage of absorption does not take place to any appreciable extent.

DELAYED ABSORPTION AND TOLERANCE

Not all observers, however, have noted delayed absorption of alcohol accompanying the development of tolerance. In fact, the reverse has been reported a number of times—a more rapid rise in the concentration of alcohol in the blood, with an earlier, although lower, maximum point. The finding of larger amounts of residual alcohol in the gastro-intestinal contents in abstainers has also been noted.⁴³ Since excitement, pain, etc., may delay absorption, it is possible that these may play more of a rôle in the delayed absorption in abstainers noted in some experiments. The fragmentary figures available, even after the intravenous injection of alcohol, also suggest a lower level in the alcohol values in the blood in habitués, as compared with abstainers. The "crossed tolerance" of alcoholics to inhalation anesthetics also requires attention. Although these observations do not represent the more usual findings, they may not, in the absence of data on a larger number of subjects, be entirely ignored. They suggest, in fact, that the location of the peak and the rate of gastro-intestinal absorption is rather a matter of individual differences, or of temporary local conditions, than an important factor in the development of tolerance, at least in some instances. In such cases, some other mechanism, following the absorption of the alcohol, must be invoked to account for the lower levels encountered.

There is no reason to believe that alcohol may be stored in the body in any other form, analogous to the glycogen storage of carbohydrates. It is conceivable, however, that bodies containing larger amounts of phospholipid, fluid, or other materials capable of holding larger amounts of alcohol, might show lower levels of alcohol in the circulating blood, following equal dosage per unit weight of the entire body, than those in which

such depots are absent. Slight relative increase in the alcohol-holding capacity of various tissues might be imagined, for example, in cases with slight decomposition and edema, in instances of alcoholic or other types of obesity, and in certain other normal and pathological variations; but there have been no observations as yet to indicate that it actually occurs. If true, it might allow a slight increase in the oxidation rate without revealing it in the curves of blood concentration.

EXCRETION OF ALCOHOL

The excretion of alcohol is always quite small, but may vary from one to more than 10 per cent of the entire amount ingested. This amount may be altered by any factors which increase the total amount of the excretions—urine, saliva, exhaled air, etc. Accordingly, the use of water or diuretic drugs to increase urinary excretion,⁶ and of carbon dioxide inhalations,⁶ and other methods of increasing the respiratory volume,^{6,7} may serve perceptibly to accelerate the rate of decline in the alcoholic content of the blood. Since, however, the concentration in the excretions is proportional to the concentration found in the blood, it is not probable that individuals with a high tolerance, who have a lower alcoholic content in the blood to begin with, would show any increase in the total amount so excreted, and in any case this would be far too low to account for the differences in the levels found in individuals with high and low degrees of tolerance to alcohol.

The increased excretion due to increased respiratory volume does, however, constitute a factor in perceptibly lowering the alcoholic content of the blood in cases of fever,¹ exposure to lowered air pressure as at high altitudes,⁴ from muscular exercise,⁷ and may, perhaps, be a factor in the lowering reported following the administration of dinitrophenol.⁸⁻⁹

RATES OF OXIDATION IN HABITUÉS AND ABSTAINERS

A number of workers have insisted that the alcohol is more rapidly oxidized and destroyed in the tissues of habitués than in the bodies of abstainers.^{48,71,72} The chief basis for this belief lies in the lower levels of alcohol found in the blood stream of the habitués, following the administration of alcohol by mouth, together with observations indicating more rapid, rather than slower absorption from the gastro-intestinal tract. Even if these findings should be generally confirmed, there are, as has been shown, a number of other possible explanations for the differences presented.

Examination of the data available on the concentration of alcohol in the blood in persons habituated to the use of alcohol as well as in abstainers shows that, although in the former the maximum, whether occurring earlier or later than in the latter, occurs at a lower level, the rate of decline in the two sets of figures are generally quite parallel, indicating that the destruction of alcohol, after the first hour or two is passed, proceeds at about the same rate in both groups. This

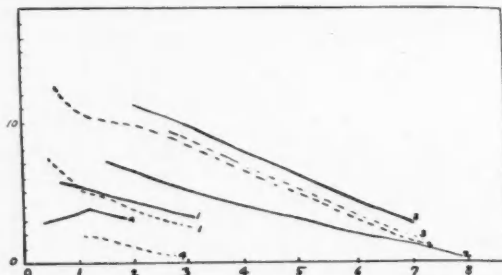


Chart 3.—Reported cases. The concentration of alcohol in the blood of man after oral administration. (The horizontal figures represent hours, the vertical mg. alcohol.) (1) Fleming and Stotz, (2) Schweisheimer, (3) Bogen, (4) Miles. — Abstainers. Habitues.

rate is, in most cases, in the neighborhood of 0.2 milligrams per cubic centimeters per hour, so that it would take, in the average, about five hours for the concentration of alcohol to drop by one milligram per cubic centimeter. (See Chart 3.)

The differences in the actual level of alcohol in the blood of abstainers and habitués given the same dose per kilogram of body weight, however, is often several milligrams per cubic centimeter.¹⁸ In other words, the habitué must, in the time taken to reach his peak value, have destroyed more alcohol than would ordinarily be destroyed by others, or by himself at a later stage, in five to ten times that period. Studies of the respiratory quotient following the ingestion of alcohol show that this early rapid combustion does not occur, and accordingly the facile explanation of increased oxidation as the cause of tolerance is inadequate.

There is considerable doubt, in fact, whether the rate of oxidation of alcohol in the body may ever, under any conditions, really be changed. As has been shown, it appears to be independent of the concentration of alcohol in the blood stream, as well as independent of the ability of the subject to tolerate large doses. Much controversy has developed around the problem as to whether alcohol may be utilized in the performance of muscular work, in addition to its recognized function of producing heat. Despite many complicated and erudite attempts to demonstrate such an effect, it must be concluded that careful studies have failed to establish it conclusively, and that, if present at all, it must be true, but to a very limited extent. The accelerated rate of disappearance of alcohol from the blood stream in subjects given exercise may well have represented increased excretion through greater respiratory volume, rather than the actual oxidation of alcohol within the body.

The same may, perhaps, be true of the instances of increased tolerance to alcohol reported in cases of fever, increased metabolic rates, or the administration of dinitrophenol.

IN CONCLUSION

It appears, then, that not one of the various mechanisms described for the development of tolerance to alcohol may be accepted as complete explanations for the phenomena observed. The rôle of slowed absorption is, perhaps the best

established and the most generally effective, but it does not appear to explain all instances observed. Increased rate of oxidation has been frequently invoked, and may exist in small degree, but is not yet proved, and is certainly inadequate to explain the differences existing. Increased excretion, increased amounts of alcohol-holding materials in the body, and even enteric destruction of alcohol, as well as possible hepatic barriers may play a slight, but certainly never an important rôle in this connection. An increased ability of the individual cells and tissues to withstand the effects of alcohol has not yet been demonstrated. By far the greatest reliance must be placed on the development of sufficient judgment to avoid the ingestion of quantities of alcoholic liquors which may lead to deleterious consequences—physical, mental, moral; social and economic, both immediate and remote.

Olive View Sanatorium of the County of Los Angeles.

REFERENCES

1. Anstie, F.: Stimulants and Narcotics. London. 1865.
2. Roosevelt, Mrs. Franklin D.: Quoted in Time, May 4, 1935.
3. Mellanby, Edw.: Alcohol—Its Absorption into and Disappearance from the Blood Under Different Conditions. London. 1919. Special Report, Series No. 31, Medical Research Committee.
4. Biehler, W.: Blutkonzentration und Ausscheidung des Alkohols im Hochgebirge, *Archiv. f. exp. Path. u. Pharmacol.*, 107:20, 1925.
5. Hunter, F. T., and Mudd, S. G.: Carbon Dioxid Treatment in Acute Alcoholic Intoxication, *Boston M. and S. J.*, 190:971 (June 5), 1924.
6. Kionka, H.: Variations in the Alcohol Content of Human Blood, *Archiv. f. exp. Path. u. Pharmacol.*, 128:133, 1928.
7. Völtz, W., and Baudrexel, A.: Einfluss der Muskelarbeit auf die Ausscheidung des Alkohols in Atmung und Harn. *Archiv. f. d. ges. Physiol.*, 142:47, 1911.
8. Widmark, Erik M. P.: Effect of Dinitrophenol on Oxidation of Alcohol, *Bioch. Ztschr.*, 276:268, 1935.
9. Harger, R. N., and Hulpien, H. R.: Dinitrophenol and Alcohol, *Science*, 81:7, Supplement (April 19), 1925.
10. Newman, H. W., Cutting, W. C., and Tainter, M. L.: The Action of Dinitrophenol on the Rate of Metabolism of Ethyl Alcohol in Vitro, *Proc. Soc. Exp. Biol. and Med.*, 32:1479 (June), 1935.
11. Carpenter, T. M.: The Effect of Muscular Exercise on the Metabolism of Ethyl Alcohol, *J. Nutrition*, 6:205 (March), 1933.
12. Canzanelli, A., Guild, R., and Rapport, D.: Use of Ethyl Alcohol as Fuel in Muscular Exercise, *Am. J. Physiol.*, 110:416 (Dec.), 1934.
13. American Automobile Association: Drunken Driving Laws and Their Operation. Washington, D. C. 1934.
14. Bahnsen, P., and Vedel-Petersen, K.: Experiments on Drivers of Motor Vehicles, *J. Ind. Hyg.*, 16:304 (Sept.), 1934.
15. Heise, H. A.: Alcohol and Automobile Accidents, *J. A. M. A.*, 103:739 (Sept. 8), 1934.
16. Heise, H. A.: Is Alcohol a Surgical Problem? *Am. J. Surg.*, 26:352 (Nov.), 1934.
17. Bogen, E.: The Diagnosis of Drunkenness, *Calif. and Western Med.*, 26:778 (June), 1927.
18. Bogen, E.: Drunkenness—A Quantitative Study of Acute Alcoholic Intoxication, *Am. J. Med. Sciences*, 176:153 (Aug.), 1928.
19. Carter, G.: Tests for Drunkenness, Particularly in Relation to Motor Accidents, *J. State Med.*, 36:249 (May), 1928.
20. Heise, H. A.: The Specificity of the Test for Alcohol in Body Fluids, *Am. J. Clin. Path.*, 4:182 (March), 1934.
21. Harger, R. N.: Demonstration of Tests for Alcohol at the Cleveland Convention of the American Medical Association, *J. A. M. A.*, 102:1597 (May 12), 1934.
22. Gettler, A. O.: Chemical Evidences of Alcoholic Intoxication and Their Medico-Legal Significance, *New Eng. J. Med.*, 201:724 (Oct. 10), 1929.
23. Gettler, A. O.: Toxicology in the Medico-Legal Autopsy, *Am. J. Clin. Pathol.*, 4:50 (Jan.), 1934.
24. Gettler, A. O., and Freirich, A. W.: Determination of Alcoholic Intoxication During Life by Spinal Fluid Analysis, *J. Biol. Chem.*, 92:199 (July), 1931.
25. Gettler, A. O., and Tiber, A.: The Alcoholic Content of the Human Brain—Its Relation to Intoxication, *Arch. of Pathol. and Lab. Med.*, 3:218 (Feb.), 1927.
26. Grehant, N.: Researches on Acute Alcoholism—Determination of Alcohol in the Blood and in the Tissues, *C. R. Acad. d. Science*, 129:746, 1899.
27. Hindmarsh, James and Linde, P.: Alkoholuntersuchungen bei Unfallverletzten, *Acta Chirurgica Scandinavica*, 75:198, 1934.
28. Johnson, F. S.: Report of Two Hundred Examinations for Acute Alcoholism, *U. S. Naval Medical Bull.*, 28:85 (Jan.), 1930.
29. McNally, W. D., and Embree, H. C.: Alcohol in the Human Body, *Arch. Pathol.*, 5:607 (April), 1928.
30. Muehlberger, C. W.: Scientific Estimation of Alcoholic Intoxication, *Am. J. Police Science* (March), 1930.
31. Naville, F.: Chemical Proof of Drunkenness and the Chemical Measurement of Its Intensity, *Rev. Méd. de la Suisse romande*, 48:849 (Oct. 25), 1928.
32. Nicloux, M.: Alcohol in Body Fluids, *C. R. Soc. de Biol.*, 51:980, 982, 1899; 52:622, 1900.
33. Schmidt, M.: Concentration of Alcohol in Blood, *J. Ind. Hyg.*, 16:355 (Nov.), 1934.
34. Smith, S., and Stewart, C. P.: The Diagnosis of Drunkenness from the Excretion of Alcohol, *Brit. Med. J.*, 1:87 (Jan. 16), 1932.
35. Southgate, H. W., and Carter, G.: Excretion of Alcohol in Urine, *Brit. Med. J.*, 1:463 (March 13), 1926.
36. Turner, R. G.: Blood Alcohol and Its Relation to Intoxication, *J. Pharmacol. and Exper. Therap.*, 44:305 (March), 1932.
37. Widmark, Erik M. P.: Die Theoretischen Grundlagen und die praktische Verwendbarkeit der Gerichtlich-medizinischen Alkoholbestimmung. Berlin. 1932.
38. Emerson, H., editor: Alcohol and Man. New York. 1932.
39. Bogen, E., and Hisey, L. W. S.: What About Alcohol. Los Angeles. 1934.
40. Whitaker, D. M.: Actions and Effects of Alcohol Upon the Lower Organisms and the Single Cell. Chapter IV in Emerson's Alcohol and Man, 1932.
41. Mann, M. C.: A Demonstration of the Stability of the Genes of an Inbred Stock of *Drosophila melanogaster* Under Experimental Conditions, *J. Exper. Zool.*, 38:213, 1923.
42. Miles, W. R.: Alcohol and Human Efficiency. Public. No. 333. Carnegie Institution of Washington. 1924.
43. Gettler, A. O., and Freirich, A. W.: The Nature of Alcohol Tolerance, *Am. J. of Surg.*, 27:328 (Feb.), 1935.
44. Hanzlik, P. J.: Continued Drinking of Alcohol in Low Concentration, *J. of Pharm. and Exp. Therap.*, 48:339 (Oct.), 1931.
45. Hansen, K.: Experimentelle Untersuchungen über Gewöhnung an Alkohol bei Menschen, *Bioch. Ztschr.*, 160:291, 1925.
46. Fleming, R., and Stotz, E.: The Alcoholic Content of the Blood and Cerebrospinal Fluid Following Oral Administration in Chronic Alcoholism and the Psychoses, *Archives of Neurol. and Psych.*, 33:492 (March), 1935.
47. Faure, W., and Loewe, S.: Der Alkoholspiegel im Blute gewöhnter und ungewöhnter Kaninchen nach einem Proben-trunk, *Biochem. Ztschr.*, 143:47, 1923.
48. Ford, W. H.: Normal Presence of Alcohol in the Blood, *N. Y. Med. J.*, 15:561 (June), 1872.
49. Taylor, A. E.: On the Derivation of Ethyl Alcohol Contained in the Muscle, *J. Biol. Chem.*, 15:217, 1913.

50. Harger, R. N.: Studies on So-called Normal Alcohol of the Body, *J. Indiana Med. A.*, 25:384 (Sept.), 1932.
51. Gettler, A. O., Niederl, J. B., and Benedetti-Pichler, A. A.: The Isolation of Pure Anhydrous Alcohol from Non-Alcoholic Human and Animal Tissues, *J. Am. Chem. Soc.*, 54:1476 (April), 1932.
52. Nemser, M. H.: Über das Verhalten des Alkohols im Verdauungstraktus., *Ztschr. f. Physiol. Chem.*, 53:356, 1907.
53. Balthazard, and Lambert, M.: Recherches toxicologiques sur l'alcoolisme aigu chez l'homme, *C. R. Soc. de Biol.*, 83:173 (Feb.), 1920.
54. Carlson, A. J., Kleitman, N., Muehlberger, C. W., McLean, F. C., Gulickson, H., and Carlson, R. B.: Studies on the Possible Intoxicating Action of 3.2 Per Cent Beer. Chicago, 1934.
55. Himwich, H. E.: The Physiological Action of Alcohol. Chapter I in Emerson's Alcohol and Man. 1932.
56. Abramson, L., and Linde, P.: On the Passage of Ethyl Alcohol Into the Spinal Fluid in Man, *Arch. internat. de pharmacodynam. et de therap.*, 30:325, 1930.
57. Mehrrens, H. G., and Newman, H. W.: Alcohol Injected Intravenously—Its Penetration Into the Cerebrospinal Fluid in Man, *Arch. of Neurol. and Psych.*, 30:1092, 1933.
58. Schumm, O., and Fleischmann, R.: Untersuchung über den Alkoholgehalt der Spinalflüssigkeit bei Alkoholisten, *Deutsche Zeitschr. f. Nervenheilk.*, 46:275, 1913.
59. Haggard, H. W., and Greenberg, L. A.: The Excretion of Alcohol in Urine and Expired Air, *J. Pharm. and Exp. Therap.*, 52:150 (Oct.), 1934.
60. Liljestrand, G., and Linde, P.: Elimination of Alcohol in the Expired Air, *Skand. Arch. Physiol.*, 60:273, 1930.
61. Haggard, H. W., and Greenberg, L. A.: Rate of Oxidation of Alcohol in the Body, *J. Pharm. and Exp. Therap.*, 52:167, 1934.
62. Gabbe, E.: On the Alcohol Content of the Blood After Intravenous Injection in Man, *Deutsches Archiv. f. klin. Med.*, 122:81, 1917.
63. Chittenden, R. H., Mendel, L. B., and Jackson, H. C.: Influence of Alcohol and Alcoholic Drinks Upon Digestion, *Am. J. Physiol.*, 1:164, 1898.
64. Hanzlik, P. J., and Collins, R. J.: The Absorption of Alcohol, *J. Pharm. and Exp. Therap.*, 5:185, 1913.
65. Pringsheim, Josef: Chemische Untersuchung über das Wesen der Alkoholtoleranz, *Biochem. Ztschr.*, 12:143, 1908.
66. Beaumont, William: Physiology of digestion. Plattsburg. 1833.
67. Haggard, H. W.: Absorption, Distribution and Elimination of Ethyl Ether, *J. Biol. Chem.*, 59:737, 1927.
68. Shapiro, I.: Studies on Ketosis—The Comparative Glycogenic and Ketolytic Action of Glucose and Some Carbohydrate Intermediates, *J. Biol. Chem.*, 108:373, 1935.
69. Emerson, R.: The Effect of Certain Respiratory Inhibitors on the Respiration of Chlorella, *J. of Gen. Physiol.*, 10:469 (March 20), 1927.
70. Schweisheimer, W.: Der Alkoholgehalt des Blutes unter verschiedenen Bedingungen, *Deutsches Archiv. f. klin. Med.*, 109:271, 1912.
71. Hunt, Reid: Studies in Experimental Alcoholism. Hygienic Laboratory Bull. No. 33, U. S. P. H. S. Washington. 1907.
72. Rosenfeld, G. E.: Einfluss des Alkohols auf den Organismus. Wiesbaden. 1901.
73. Higgins, H. L.: Nutritive Value of Alcohol, *Am. J. Physiol.*, 41:258 (Aug.), 1916.
74. Battelli, F., and Stern: Die Alkoholoxydase in den Tiergeweben, *Biochem. Ztschr.*, 28:145, 1910.
75. Hirsch, J.: Über die Oxydationen von Alkohol durch die Leber von an Alkohol gewöhnten und nicht gewöhnten Tieren, *Biochem. Ztschr.*, 77:129, 1916.

DISCUSSION

C. H. THIENES, M. D. (Department of Pharmacology, University of Southern California, Los Angeles).—In general, one or more of three major physical factors may be involved in drug tolerance: delayed absorption, as with

white arsenic; increased elimination or detoxication, as with chloral hydrate; and decreased tissue susceptibility, as with morphin. A fourth factor of psychologic change must not be overlooked. Experiments of recent years have thrown much doubt on early hypotheses concerning drug tolerance, and new concepts are being proposed. We must, therefore, approach the problem with open minds, testing each factor from every conceivable point of view. Much loose thinking has clouded the issues involved, due to inability to analyze the problem into its various parts. As pointed out by Doctor Bogen, the observation of a blood alcohol lower in habitués than in abstainers, after a given dose of alcohol by mouth, has been interpreted by some as due to delayed absorption, by others as due to hastened oxidation, excretion or other means of elimination. Obviously, still other possibilities remain, and beyond these is the fact that there is not unanimity of observation. Too little attention has been given to psychologic factors, such as conditioning of reflexes. Experiments on nicotin tolerance, carried out in the pharmacology laboratory at the University of Southern California, afforded some evidence in this direction.

Confusion of our understanding has been due in part to the misuse of the terms "tolerance," "habituation," and "addiction." Indeed, there is still no uniform definition for any of these terms. Uniform definitions are lacking, probably because of our lack of understanding of major factors or mechanisms involved in each concept; therefore, as new information is obtained, the concepts represented by the terms change. Writers of a few years ago felt free to consider tolerance, addiction and habituation as phenomena distinct from each other; today the tendency is to look upon these phenomena as closely interrelated. Thus Tatum, in his analysis of the subject in "Physiological Reviews" (1931), emphasizes selective tolerance for the depressant effects of morphin, with no tolerance for the exciting effects, as a causal factor in the production of morphin addiction.

Doctor Bogen's careful analysis of the alcohol question, and his own experimental contributions, both in the present and in earlier publications, have done much to clear our thinking on this important problem.

✱

HENRY W. NEWMAN, M. D. (2267 Sacramento Street, San Francisco).—Doctor Bogen has presented us with an exhaustive critical review of the literature on the pharmacology of ethyl alcohol, which, with his original work, represents a real contribution to our understanding of this subject.

The outstanding point of the whole paper strikes me as being the delineation of our lack of any definite knowledge of the mechanism of the tolerance to alcohol said to be possessed by certain individuals; a subject on which any layman would not hesitate to venture an authoritative answer. The fact remains, however, that we are entirely in ignorance of whether or not an individual may acquire a tolerance to alcohol, or what the mechanism of such tolerance may be.

Although we lack any positive knowledge of the nature of tolerance, we know fairly definitely that a number of factors previously proposed to account for it are in no way adequate. The careful work of Fleming and Stotz showed that habitual drunkards, far from absorbing alcohol more slowly from the gastro-intestinal tract, absorb it more rapidly, and thus attain their maximum concentration sooner. Moreover, I have shown that dogs, after habituation to large amounts of alcohol, do not burn the substance any more rapidly—as evidenced by the rate of decline of the alcohol content of their blood after intravenous injection of alcohol—than they did before the period of habituation. Thus, if habitués absorb alcohol as rapidly as abstainers, and metabolize it at the same rate, any acquired tolerance (if such there is) must be due either to a decreased penetration of the nervous system, or to a lessened susceptibility of the nerve cells to the drug. The recent work of Fleming and Stotz, who found no significant difference in the concentration of alcohol in the spinal fluid of habitués and abstainers after a test dose, seems to make the former hypothesis unlikely, leaving us

with decreased cellular sensitivity as the only tenable theory. This is now under investigation in our laboratory.

That alcohol is unique among our common metabolites in being oxidized at a constant rate, regardless of its concentration in the body, has long been accepted, based on the thorough investigations of Mellanby and Widmark. Thus the assertion of Haggard and Greenberg that this was false immediately inspired further careful investigation of this point. It is with gratification that I find Doctor Bogen's work on this problem to be entirely in accord with my own, supporting the thesis of the older investigators that alcohol is burned at a constant rate, and effectively refuting the contentions of Haggard and Greenberg.

INTRACAPSULAR FRACTURES: NECK OF THE FEMUR*

A STATISTICAL SURVEY OF END-RESULTS

By MERRILL COLEMAN MENSOR, M.D.

AND

EARLE T. DEWEY, M.D.

San Francisco

DISCUSSION by Paul E. McMaster, M.D., Los Angeles; Keene O. Haldeman, M.D., San Francisco; E. W. Cleary, M.D., San Francisco.

THE treatment of fractures involving the neck of the femur of an intracapsular nature has always been an important surgical problem, and in spite of the vast amount of work, both experimental and clinical, that has been done on this condition, and the tremendous strides that have been made in the care of other common traumatic bone injuries with marked improvement in end-results and reduction of disability, this fracture still presents to the profession as great a mystery in how it should be handled as it did over one hundred years ago. In spite of the addition of the x-ray to our armamentarium, the title, "The Unsolved Fracture," used by Kellogg Speed in a recent article, accurately sums up the present state of our knowledge and ignorance.

COMMENT ON THE LITERATURE

A cursory review of the literature immediately gives us the impression that the very problems confronting the surgeon of today were faced by the men of over one hundred years ago. They were at that time equally cognizant of the difficulties now encountered, obtained end-results equally as bad as our own, and used various types of apparatus and manipulations, the principles of which are but little changed from those now commonly used.

Baron D. J. Larrey, in a monograph published in 1823, on treatment of the fractured neck of the femur, discusses the use of the spica bandage, and deprecates the use of extension for traction, stating that this latter type of procedure has been used in all apparatus from the time of Hippocrates and Avicenna. It is his opinion that, instead of assisting nature in the reorganization, it aggra-

vates the evil. He believes that primary reduction of the fracture is simple and, therefore, there is no need of extension and traction on the fragments. Various pulmonary conditions and other complications, with which we are altogether too familiar, are spoken of as the result of this treatment. He is of the firm opinion that lack of fixation with increased motion is one of the causes of nonunion. The rigid spica bandage, very similar to our plaster of paris, was used in an attempt to maintain fixation after reduction was done.

Sabatur is quoted as using a stuffed straw-bed, with the limb held immobilized by well-filled oak-chaff bags, which is practically a parallelism for the sand-bag treatment, still occasionally used by the modern surgeon. Splints, both metal and wood, strikingly similar to the Thomas splint of today, double splints, using the same principle as the recently developed Jones traction splint, Buck's extension, the double incline plane, are all mentioned and have their advocates and critics.

J. H. Burge, 1859, advocated the use of traction with adhesive tape and counterpressure against the ischium of the patient, allowing him freedom to sit up and move about rather than some of the more cumbersome types of apparatus, which prevented anything but the supine position.

NONUNION DIFFICULTIES

Throughout this entire mass of literature, one is struck by the large percentage of nonunion and the attempts of the various surgeons to explain the condition. In seeking an explanation of the failure of union, such men as E. M. Moore, Nicholas Senn, and Levi Cooper Lane, have offered theories and experimental work. Theories in callus formation were everywhere advanced. There is the so-called vascular theory which requires apposition of the bony ends, allowing the blood vessels to unite across the fracture site to form the callus. Secondly, there is the formation of callus by the aid of the periosteum. Advocates of this theory point out at great length the absence of periosteum around the neck of the femur. Thirdly, there is the interposition of a peculiar albuminous substance between fragments. This is undoubtedly similar to a preosseous substance, recently described by Leriche and Policard in their monograph on "Growth of Bone," recognized by these investigators before the advent of the x-ray and microscope.

The causes of nonunion are given as lack of circulation of the head, absence of periosteum about the neck of the femur, lack of a true membrane, which would help make a mass capable of retaining bones in close contact and assist in the generation of callus. The fact that the fracture is entirely intracapsular, allows effusion of synovial fluid which causes motion and effects callus in a chemical manner. This is contrasted with extracapsular fractures in which the blood is not changed by the synovial fluid and a definite hematoma formed, which allows the progress of union and callus formation. Although the theory of the retardation of union by synovial fluid was advocated by Charles Bell in 1824, he rather typifies

* From Orthopedic Service, Laguna Honda Infirmary, Stanford University Medical School and San Francisco Department of Public Health.

Read before the General Surgery Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

the pessimism of that day in the following quotation, "All our hopes in succeeding in curing a fracture of the neck of the thigh bone have been successively abandoned."

EXPERIMENTS OF NICHOLAS SENN

In 1883, Nicholas Senn did some very interesting experimental work on animals. He found that fracturing the necks of the femur of dogs and immobilizing them invariably gave nonunion. However, in a series of some thirty-odd cats, in which the fracture was immediately followed by pegging of the bone either by a nail or a bone peg through the neck, the percentage of union was considerably higher. The cause for nonunion of intracapsular fractures was attributed to inability to maintain perfect coaptation and immobilization of fragments during the time required for bony union to take place. The operative procedure gave a perfect degree of coaptation and immobilization of the fragments. The patient could be placed in any position in bed, or even be taken out of doors as soon as the dressing was applied, thus preventing excoriation and diseases, and prolonged confinement in bed in a recumbent position. How similar is this advocacy to the use of the Smith-Petersen nail and the immediate bone-pegging, now so commonly heralded as "the answer to the maiden's prayer."

RECENT METHODS TO SECURE MOBILIZATION

We then progress to the era of the Whitman abduction treatment, in which he, perhaps inadvertently, reverts to the theory and methods of immobilization of Larrey, some half-century before. This, likewise, had its vogue with variable success, but the large percentage of nonunion was still unanswered. We find nailing of the fragments again adopted, as aseptic surgery makes this procedure less hazardous to be cast in the discard, and recently revised with some mechanical improvements advocated by Smith-Petersen.

Very lately splendid mechanical devices by Jones of Grass Valley, California, and Anderson of Seattle, have given us a means for perfect anatomical replacement of fragments, but not a sufficient increase in the number of bony unions obtainable by their methods to warrant universal adoption.

It is, likewise, interesting to note that Brainard, a century ago advocated boring through the fractured end of the bone in cases of delayed or nonunion to stimulate callus formation. This has been very recently advocated by some of our contemporaries in the treatment of such cases.

It is our hope that we have portrayed from the above résumé the present status and lack of progress made in the therapy of fracture of the neck of the femur, and believe by the presentation of the following statistical analysis to further demonstrate the need of a coördinated effort on the part of the surgeons to devise a uniform procedure that will improve the end-results in this disabling condition, or at least demonstrate the scientific causes for the nonunion, so a prognosis can be given with some assurance.

MATERIAL INCLUDED IN THIS SURVEY

This survey represents a series of 148 consecutive cases, consisting of eighty-nine intertrochanteric, fifty intracapsular, six shafts, and three pathological fractures of the femur, treated by many competent surgeons of the San Francisco area on the staffs of the University of California and Stanford University in the past seven years, by various accepted methods. It constitutes all of the cases of this nature admitted to the Laguna Honda Infirmary of San Francisco, for a period extending from January, 1928, to July, 1934. As we are particularly interested in the intracapsular fracture, we have found that in fifty cases of this type, forty-four were treated at the San Francisco Hospital, five at the Laguna Honda Home, and one at the Saint Francis Hospital.

METHOD OF ANALYSIS

Our method of analysis is shown by a typical chart, here illustrated, which covers the important points of age, sex, the elapsed time of reduction, method of treatment, period of immobilization, hospital complications, and end-results, with the amount of permanent disability present in those cases in which a final follow-up and check-up examination was possible.

Following the accompanying outline, using a separate form for each individual patient, it was found that out of 148 cases studied, there was approximately 33 per cent of the cases of the strictly intracapsular variety. Of these, twenty-seven were males and twenty-three females. The fractures involved the right lower extremity in twenty-one cases, and the left lower extremity in twenty-nine cases. The average age of the patients was 61.8 years, the youngest being 45 and the oldest 90. The mode of injury was decidedly interesting. We were greatly impressed by the minimal amount of trauma necessary to produce a potentially serious injury. This revives the subject that has been discussed for over a hundred years, about the character of the osseous tissue and its relative circulatory changes as age advances. The causes of accident were delineated according to their frequency, as follows: Thirty-two patients sustained their fractures by a simple fall to the floor or street from a standing position. Seven fell down stairs of varying lengths. Five were injured in automobile accidents, four fell out of bed, and two were knocked down in fights. As the relationship between syphilitic infection and nonunion has always been a point of consideration in fractures, out of Wassermann tests made on forty-one of the patients, only seven were found to be positive.

ELAPSED PERIOD BETWEEN TIME OF INJURY AND REDUCTION OF FRACTURES

The elapsed time between the sustaining of the injury to the reduction of the fractures shows an average of nine and six-tenths days, the shortest period being two hours and the longest time three months and ten days. In four of the cases no data were available, in four others no attempt at reduction was made. Methods employed in the

Name	Age	Sex	Date of Fracture	(Right, Left)
Mode of Injury				
Elapsed Time to Reduction		Nursing		
Method of Treatment		Where	By Whom	
Period of Immobilization				
Elapsed Time to Ambulation		With Crutches	Without Crutches	
Time of Transfer to L. H. H.		Time to Discharge as Ambulatory		
X-rays	On Entry			
	Following Reduction			
	Final			
Hospital	Decubitus	Pulmonary	Mental	
Complications	Intestinal	Urinary	Others	
Efficiency of Apparatus				
Changes		Duration		
Final Examination - Complaints				
Shortening		Attitude	Stability	
Motion (Percentage as Compared with Normal Leg)				
		Active	Passive	
Flexion				
Extension				
Abduction				
Adduction				
Internal Rotation				
External Rotation				
End Result of Fracture		Death	Cause	
Permanent Disability				

Fig. 1.—Chart used for individual analysis.

reduction of this fracture utilized a wide range of accepted therapy. Several of these patients, after an unsuccessful attempt by one method, were treated by two or three other types of procedure. In two cases the records failed to reveal sufficient data as to the technique employed. The following methods were employed and are enumerated according to frequency.

Wilkie boots, 16	Double plaster of paris spica, 14
Whitman procedure, 10	Autogenous peg, 3
Jones traction splint, 4	Sand bags, 3
Buck's extension, 3	Skeletal traction, 1
Skin traction, 2	Whitman reconstruction, 1
Resection of the head, 1	Sheehy frame, 1
Multiple drilling, 1	
Thomas splint, 6	

SOURCES OF THE CLINICAL MATERIAL

These patients were treated by twenty different surgeons (on the staff of the San Francisco Hospital) from the University of California and Stanford University Medical School; twenty-five cases were treated on the University of California service and nineteen on the Stanford service. Five cases were primarily reduced at the Laguna Honda Infirmary.

The period of immobilization following these various procedures showed an average of sixteen weeks, the shortest time being seven weeks and the longest thirteen months. There were eight cases in which the date of removal of immobilization was not recorded in the record.

The elapsed time, from the date of the fracture to the date at which the patient first began weight-bearing with crutches, showed an average of twenty-five weeks, the shortest time being ten and one-half weeks and the longest seventy-nine weeks. This does not include thirty-three pa-

tients who never left their beds, following their accidents.

INFORMATION SECURED THROUGH X-RAY EXAMINATION

Review of x-rays available for study, in forty-one of the cases showed the typical deformity of fracture of the neck with upward and backward displacement of the shaft combined with varied amounts of external rotation. The average amount of displacement resulted in about one inch of shortening, and it was frequently observed that in those cases unsuccessfully reduced, this was increased rather than decreased, following manipulation. In nine patients x-ray data, following reduction, were not available. In the remaining forty-one, twenty-one showed good anatomical replacement of the fragments; ten showed passable reduction, sufficient to obtain bony union with some deformity; ten patients had poor and incomplete reduction. Considering these x-rays, we must admit that our criteria for the above conclusions are necessarily limited, as it has been only within a relatively recent period that lateral x-rays of fractures of this character have been introduced. Some of the cases which are classified as excellent might have shown incomplete reduction had lateral x-rays been available. The criterion adopted for passable reduction required approximately three-quarters of the fractured surfaces to be in apposition. The final x-rays in those cases of nonunion showed various degrees of absorption of the neck of the femur up to almost complete obliteration. In some, in spite of evident nonunion, the character of the detached head indicated that it was still viable, while in others marked increase in density, when contrasted with the adjacent bone, resulted in the presumptive death of the head. In three patients in whom a definite diagnosis of union was made in their records, attempted confirmation by physical examination and further x-rays, showed a characteristic nonunion with good functional results.

COMPLICATIONS ARISING IN THE CONVALESCENT PERIOD

A physician who has had a patient suffering from this type of injury under his care realizes the importance of good nursing and the complications that are apt to ensue, resulting not alone in unfavorable end-results relative to the fracture, but often in the demise of his patient. In this series thirty-three cases, or 66 per cent, had definite complications during their convalescent period. Nineteen cases developed decubiti, many so extensive that the type of treatment instituted had to be discontinued. This complication was found as decidedly prevalent following the use of immobilizing plaster, including part of the trunk. The plaster frequently became soiled by perspiration and excreta, difficulty was undoubtedly entailed in keeping the skin healthy and dry, and not uncommonly upon removal of the spica, decubiti, involving the entire sacral area, often extending to the osseous structures, was noticed. In contrast to this, in those patients treated by apparatus which did not necessitate maintenance in



Fig. 2.—Typical case showing recent intracapsular fracture of femur.



Fig. 3.—Same patient demonstrating excellent anatomical reduction.



Fig. 4.—Same patient, showing typical nonunion.

the supine position and allowed free access to the buttocks and lower back without pelvic fixation, complications of this nature rarely occurred. The next most frequent complications were pulmonary and genito-urinary. Ten cases developed pneumonia shortly following the accident, which was attributed to the supine position necessitated by the method of treatment used. Ten had urinary disturbances, incontinence and cystitis being the most common findings. Gastro-intestinal complications developed in eight cases, typified mostly by distention, partial ileus, and inability to pass flatus per rectum. In a few cases the condition progressed to the point where vomiting became of serious importance. Mental changes were noted in seven cases and seemed to bear no relationship to advanced age of the patients, as one of the most serious cases of mental aberration occurred in a relatively young individual. Improper application of the apparatus caused such extreme discomfort to three of the patients that the method of procedure had to be changed. One patient developed a peroneal palsy during the use of a Thomas splint.

MORTALITY FIGURES

The mortality of this series showed sixteen deaths, 32 per cent, the average lapse of time to death following initial injury being six months, the shortest one week, and the longest three years and four months. All of these patients were still bedridden as a result of their fracture. Death cannot be attributed to the fracture *per se* in some of these cases. Chronic cardiovascular disease accounted for six, carcinoma of the stomach one, general paresis one, diabetes one. Deaths directly attributed to the fracture resulted in four from general sepsis due to extensive decubiti; pneumonia accounted for two; agranulocytosis, secondary to the use of large doses of pyrimidon for the relief of pain, caused one.

HOSPITALIZATION PERIODS

The average period of hospitalization in the San Francisco Hospital in the forty-four cases treated by them was seventy-eight days, the shortest being eight days and the longest four hundred and ten days.

COMMENT

The result of this survey has demonstrated that, in spite of treatment rendered by a large number of competent surgeons in San Francisco, using various types of methods in their therapy, the end-results obtained in the care of this fracture are decidedly poor. There was not a single case in the series in which complete bony union was demonstrable.

The opinion is prevalent in many circles that nonunion results in a permanent crippling, causing almost a total disability. We believe that this error has arisen because of diagnosis based solely on x-ray findings, rather than on accurate analysis of the patient's functional ability. We have found that eleven of the cases examined demonstrating a frank nonunion are ambulatory with a minimal amount of discomfort, some using a cane and some without support of any kind. They all have shortening and a definite limp, but are able to take care of themselves without assistance and perform many types of useful work. At the present time there are seventeen bedridden, eleven ambulatory, six ambulatory on crutches. This, in our opinion, definitely contradicts the impression that nonunion is incompatible with future usefulness of the injured extremity. In the thirty-four living cases, final check-up examination was possible in twenty. Of these we found the average range of motion to be limited as follows: Flexion, 50 per cent; extension, 70 to 75 per cent; abduction, 30 to 40 per cent; adduction, 10 to 15 per cent; internal rotation, 95 to 100 per cent; external rotation almost unrestricted.

SUMMARY

One hundred and forty-eight cases of fractured femur entering the Laguna Honda Home have been analyzed over a period of six and one-half years. Of these, fifty cases were found to be definitely intracapsular in type. Bony union was unable to be demonstrated in any case in the series. The mortality rate was 32 per cent, although the average death following the initiation of the fracture was six months, thereby reducing the mortality directly attributed to the fracture to a much smaller percentage. Eleven cases of definite non-



Fig. 5.—Recent unreduced fracture, intracapsular of femur.



Fig. 6.—Same patient showing excellent anatomical replacement.



Fig. 7.—Same patient six months later with typical nonunion.

union are ambulatory, the patients carrying on some type of occupation.

CONCLUSIONS

1. The present methods used in the treatment of intracapsular fracture of the neck of the femur are unsuccessful for the promulgation of bony union.

2. Nonunion of the fractures does not bear any direct relationship to the age of the individual in this series.

3. Nonunion is not incompatible with weight bearing and the carrying on of certain limited occupations.

4. Twenty-two per cent are ambulatory, without support.

5. Mortality in the series was 32 per cent.

6. The injury results in the majority of instances from relatively minor trauma.

7. Thirty-four per cent are still bedridden after a period of one to seven years.

8. Treatment directed at early activity of the patient seems to offer a more favorable prognosis and markedly reduces the morbidity of the complications.

9. Proper nursing care is as important as accurate reduction of the fracture.

490 Post Street.

DISCUSSION

PAUL E. McMASTER, M. D. (3030 Wilshire Boulevard, Los Angeles).—I wish to compliment the authors of the foregoing work, first, because of the large amount of good statistical data which they have accumulated, and, secondly, for the unbiased manner in which they have presented their study.

Clinicians who see and treat many intracapsular fractures of the neck of the femur know that the results are not encouraging, either for bony union or satisfactory function; or, in a number of cases for life itself, often irrespective of the type of treatment. Rather startling figures are presented in this paper, namely, no case in fifty intracapsular fractures of the neck of the femur resulted in bony union and, in addition, there was a mortality of 32 per cent.

Numerous new treatments for this fracture, as mentioned, are to be found in the current literature. Some are new, others are old principles with new applications. Although different ones of these methods are claimed to give excellent results, such does not obtain in the hands of the majority of clinicians. Hence, one sees the necessity for continuous investigative work in this special type of fracture.

A review of a large number of cases of intracapsular fracture of the neck of the femur at the Los Angeles County General Hospital has impressed me with a few fundamentals and results in the treatment. To begin with, there was a relatively low percentage of bony union. However, the mortality rate was lower than 32 per cent, as quoted above.

The necessity for lateral roentgenograms is imperative, as illustrated in the following case. In the anteroposterior view, as shown in the lantern slide I am exhibiting, the fracture fragments appear to be in direct approximation. However, the lateral view, as you can see, shows the fracture surfaces unopposed in any portion. Further, that roentgenologic interpretations are not always entirely accurate is illustrated in another case and by this next slide.

This shows the upper portion of the femur removed at autopsy from a woman in her sixties, who died of pneumonia, fourteen months after receiving an intracapsular fracture of the femoral neck. She had walked some on the leg, and clinical roentgenograms indicated a bony union. Even the specimen picture indicates bony union. A sagittal section of the specimen, however, reveals that the union was not bony, but cartilaginous and rubbery motion existed between the two fragments. This is the type of case which I believe explains why some patients who are supposed to have bony union, subsequently "break down" and result in nonunion and all the usual associated symptoms.

Another observation gained from this study was that bony union resulted in those cases in which there was little or no displacement of the fracture fragments, wherein adequate immobilization could be maintained in almost any type of treatment. This, I think, tends to minimize the deleterious effect of synovial fluid on the healing of these fractures; for with cortical breaks, as these cases show, and no periosteal covering, synovial fluid could infiltrate into the fracture site and still exert its often-claimed inhibiting influence to callus formation.

A further impression gained from this study was that in those cases with displacement of the fracture fragments, not only was adequate reduction necessary for healing, but complete and uninterrupted immobilization as well. In each case in which good reduction, as determined by anteroposterior and lateral roentgenograms, was obtained, which in turn was followed by slipping of the fragments (even though a fair portion of the fracture surfaces were still opposed) nonunion resulted. On the contrary, if no slipping occurred after reduction, irrespective of the type of treatment, bony union usually followed.

Thus, in addition to adequate reduction, the necessity is seen for complete and well-maintained immobilization, whether obtained by closed or operative procedures, both of which, I believe, have their place.

✱

KEENE O. HALDEMAN, M. D. (350 Post Street, San Francisco).—It is worth while to study the failures that occur so frequently in intracapsular fractures of the neck

of the femur. The foregoing careful analysis should point the way to a better treatment of such cases.

I have observed many of the patients so studied in the Laguna Honda Home, and can confirm the results which have been recorded. However, these cases are not a true cross-section of the end-results which were obtained in the San Francisco Hospital, because the patients whose fractures united were discharged, and those in whom union was delayed or absent were sent to the Laguna Honda Home. The authors have emphasized the fact that a good functional result may be found in those fractures showing a firm fibrous union, without demonstrable bony union.

The ideal treatment of intracapsular fractures will combine absolute fixation of the perfectly reduced fragments with early motion of the hip and activity of the patient. Recent advances toward this goal include the Smith-Petersen flanged nail, and the use of multiple Kirschner wires, the insertion of which is guided by radiologic examination at the operating table. In the absence of the equipment and experience that such methods require, it is possible to obtain good bony union in about two-thirds of these cases by means of manipulative reduction followed by the Whitman type of plaster spica cast. Patients treated by the latter method should be turned on the face twice a day, should carry out deep-breathing exercises, and should be given carbon dioxide inhalations during the first week. After six weeks, partial mobilization of the knee is started by the removal of the part of the cast on the posterior aspect of the calf and heel. The hip should be immobilized for twelve weeks or longer, depending upon the radiologic examination, which in all cases should include a lateral film of the neck of the femur as well as the customary stereoscopic anteroposterior views.

*

E. W. CLEARY, M.D. (490 Post Street, San Francisco). Doctor Mensor has done a thing both courageous and worth while. He has constrained us to face stark reality, helped us to stop "kidding ourselves along," if a slang expression may be permitted.

When facts are thus honestly faced and the futility of mis-called conservative measures revealed, the way is paved for a more adequate therapy.

Fracture of the neck of the femur is a desperate emergency. Mere humans endowed with no supernatural powers may not hope to cope with it in degree of suffering and mortality inherent in a lesion which most frequently appears as part of the terminal experience of an organism near death from senility. Nevertheless, methods have been devised and adequate means found to reduce and internally fix the head fragment to the shaft. Already sufficient experience has been had with these relatively exact and positive measures to demonstrate that they are actually conservative, and that their use reduces suffering and complications, and gives the patient the best possible chance to recover.

Such papers as Doctor Mensor has presented help to lay a foundation of fact upon which we may eventually promote an adequate therapy for this lesion without the consequence that our therapy, because of its positive nature, will bring upon us undeserved blame for the considerable percentage of nonunions, complications and deaths, which are the unavoidable results of the severity of the lesion and the physical debility of the average patient.

*

DOCTORS MENSOR AND DEWEY (Closing).—The authors wish to thank Doctors McMasters, Haldeman, and Cleary for their discussions of the subject presented.

There are some points in discussion which we believe need elucidating. Doctor Haldeman has stated that these cases do not represent a true cross-section of end-results obtained in the San Francisco Hospital, because all united fractures were discharged and only those in which union was delayed or absent were sent to Laguna Honda Home. We believe this statement is somewhat in error, as the statistics show that the average period of hospitalization in the San Francisco Hospital, before discharge to the Laguna Honda Home, was seventy-four days, and that

the minimum time hospitalized at the San Francisco Hospital was nine days. It is obvious that in an average of seventy-four days, in fractures of this nature it is impossible to determine whether bony union will ensue as a result of the therapy. We do, however, admit that the data is not entirely complete, and it is our intention within the next few months to analyze a similar number of consecutive cases over the same period at the San Francisco Hospital, thus securing definite figures as to the percentage of union obtained in those cases that were discharged directly from the San Francisco Hospital and not seen at the Laguna Honda Home. We also fear that Doctor Haldeman is somewhat too optimistic in his belief that two-thirds of these cases will result in bony union by use of the manipulative reduction and the Whitman type of plaster spica cast.

We heartily agree with Doctor Cleary that the most hopeful means of treatment of this fracture lies in some form of internal splintage which will absolutely fix the fragments. At present we are not completely convinced that the Smith-Petersen nail is the ideal method of treatment, but feel that the use of an autogenous bone peg in fresh cases accomplishes the necessary fixation, at the same time acting as a direct stimulation for osteogenesis.

Doctor McMasters has very rightly called attention to the importance of lateral x-rays in this fracture, and it is our belief, now that this technique is more or less a common practice, that many of the fractures in this series that were reduced by the operator, with apparent possible reduction, would have been given further treatment if a lateral roentgenogram had been made.

CATARACTS FOLLOWING THE USE OF DINITROPHENOL: A SUMMARY OF THIRTY-TWO CASES*

By FRANK H. RODIN, M.D.
San Francisco

DISCUSSION by Warren D. Horner, M.D., San Francisco; Hans Barkan, M.D., San Francisco; Harold F. Whalman, M.D., Los Angeles.

CATARACTS following the use of dinitrophenol have been reported by Boardman,¹ Horner, Jones and Boardman,² Shutes,³ Cogan and Cogan,⁴ Lazar,⁵ Kniskern,⁶ and Allen and Benson.⁷

In this report I shall summarize thirty-two cases of cataracts, following the use of dinitrophenol, which have been observed in the San Francisco Bay region—San Francisco, Oakland and the surrounding towns. The population of this region is about one and one-quarter million.

The information was obtained by communicating with the various ophthalmologists in the San Francisco Bay region, who supplied the necessary data.

No attempt will be made to describe the appearance of the cataracts seen in these patients, as this has been well done in the reported cases.

SUMMARY OF THE DATA OBTAINED

Table 1 summarizes the information obtained. There were thirty-two cases. Only such cases were included in which there were definite clinical data that the cataracts have followed the use of dinitrophenol. All the patients were females. Cogan and Cogan's⁴ first case was the only male patient so far reported.

* From the division of ophthalmology, Stanford University Medical School.

The average age was forty-five years. The youngest was thirty years old and the oldest sixty-seven. Cogan and Cogan's⁴ second patient, and Allen and Benson's⁷ patient were each twenty-five years old.

The average length of time in which dinitrophenol was taken by twenty-nine of the patients was eleven months. A number of the patients did not use the drug continuously, but stopped for some months during the treatment. In calculating the time dinitrophenol was taken, only the actual number of months in which it was taken is included. In Case 1 the patient took the drug during a period of nineteen months, during which time she stopped for eight months.

The length of time dinitrophenol is taken apparently is not a factor in the production of the cataracts. The shortest time dinitrophenol was taken

was three months, and the longest twenty-four months.

In view of the insufficient data available, the amount of dinitrophenol taken and the dosages are not included in this report.

The time of the appearance of the cataracts after the beginning of dinitrophenol treatment is based either on the time when the diminution of vision was first observed by the patient or when the cataracts were first seen by ophthalmologists. Some of these patients had no visual disturbances when the cataracts were first observed, and the cataracts were found in routine eye examinations of patients receiving dinitrophenol.

The average time cataracts were formed after the beginning of dinitrophenol treatment was, for twenty-seven patients, fifteen months.

TABLE 1.—Summary of Thirty-two Cases of Cataracts Following the Use of Dinitrophenol Observed in the San Francisco Bay Region

Case	Patient	Age	Length of Time (Months) Dinitrophenol Was Taken	Formation of Cataract After the Beginning of the Dinitrophenol Treat- ment (Months)	Formation of Cataract After the Stoppage of the Dinitrophenol (Months)
1	M. L.	37	11	15	4
2	M. M.	65	17	19	--
3	E. A.	50	19	18	--
4	L. L.	37	9	16	7
5	J. P.	30	3	12	9
6	R. R.	44	7	11	4
7	R. H.	45	5	17	12
8	M. B.	56	7	18	11
9	G. H.	36	5	12	7
10	T. W.	38	6	6	--
11	D. B.	38	6	9	3
12	G. B.	43	14	14	--
13	D. R.	63	18	16	--
14	H. H.	44	6	11	5
15	E. G.	39	24	24	--
16	L. B.	41	4	14	10
17	A. T.	43	10	10	--
18	C. H.	53	18	23	5
19	C. W.	42	19	26	7
20	V. O.	45	7	13	6
21	V. M.	54	12	13	1
22	F. W.	60	18	18	--
23	R. B.	32	6	14	8
24	E. E.	33	12	6	--
25	M. P.	35	8	18	10
26	A. S.	36	4	12	8
27	E. B.	37	16	24	8
28	M. L.	46	12	----	--
29	E. R.	32	13	----	--
30	M. L.	54	----	----	--
31	D. T.	64	----	----	--
32	I. R.	67	----	----	--
Average		45	11 (29 patients)	15 (27 patients)	7 (18 patients)

TABLE 2.—Average Age of Patients With Cataracts Following the Use of Dinitrophenol Observed in the San Francisco Bay Region.

Ages 30 to 39.....	13 patients
Ages 40 to 49.....	9 patients
Ages 50 to 59.....	5 patients
Ages 60 to 67.....	5 patients
Total.....	32 patients
Average age of the patients.....	45 years

In eighteen of the twenty-seven patients, cataracts did not form till after the drug was discontinued. The average time cataracts formed after stopping the drug was seven months. The shortest time was one month and the longest was twelve months. Only a few of the patients continued to use the drug after there was a loss in the acuity of vision. In Cases 2 and 13, dinitrophenol was used for two months after a loss of vision was noticed. In Case 24, the patient continued to use the drug for six months after she noticed disturbance of vision, claiming that only by the use of dinitrophenol was she able to keep her weight down so that she may be employed in her occupation.

Table 2 gives the number of patients in age groups. Between the ages of thirty and thirty-nine there were thirteen patients; between forty and forty-nine, nine patients; between fifty and fifty-nine, five patients; between sixty and sixty-seven, five patients. In the last age group, the cataracts were differentiated from senile cataracts by their characteristic appearance, their rapidity of growth and maturity, and the fact that these patients were under dinitrophenol treatment. Some of these patients had been seen by ophthalmologists before they began dinitrophenol treatment, and at that time they were found to have no lenticular opacities.

The *Journal of the American Medical Association*⁸ has already warned the medical profession as to the dangers of the use of dinitrophenol. Furthermore, the Council on Pharmacy and Chemistry has rejected dinitrophenol for inclusion in New and Nonofficial Remedies.⁹

Finding thirty-two cases of cataracts, following the use of dinitrophenol, should be sufficient warning to anyone to discontinue the use of this drug until more information is available as to its action on the lens.

SUMMARY

1. Thirty-two female patients with cataracts, following the use of dinitrophenol, are here reported.

2. The average age for the thirty-two patients was forty-five years.

3. The average length of time dinitrophenol was taken by twenty-nine of the patients was eleven months.

4. The average length of time cataracts formed after the beginning of dinitrophenol treatment in twenty-seven of the patients was fifteen months.

5. The average length of time cataracts formed after the stoppage of dinitrophenol in eighteen of the patients was seven months.

6. The use of dinitrophenol should be discontinued until more information is available as to its action on the lens.

490 Post Street.

REFERENCES

1. Boardman, W. W.: Rapidly Developing Cataract After Dinitrophenol, *J. A. M. A.*, 105:108 (July 13), 1935; Rapidly Developing Cataracts After Dinitrophenol, *Calif. and West. Med.*, 43:118-119 (Aug.), 1935.
2. Horner, W. D., Jones, R. B., and Boardman, W. W.: Cataracts, Following the Use of Dinitrophenol: Preliminary Report of Three Cases, *J. A. M. A.*, 105:108-110 (July 13), 1935.
3. Shutes, M. H.: Dinitrophenol, *Am. J. Ophth.*, 18: 752-753 (Aug.), 1935.
4. Cogan, D. G., and Cogan, F. C.: Dinitrophenol Cataract, *J. A. M. A.*, 105:793-794 (Sept. 7), 1935.
5. Lazar, N. K.: Cataract Following the Use of Dinitrophenol, *J. A. M. A.*, 105:794 (Sept. 7), 1935.
6. Kniskern, P. W.: Cataracts Following Dinitrophenol, *J. A. M. A.*, 105:794-795 (Sept. 7), 1935.
7. Allen, T. D., and Benson, V. M.: Late Development of Cataract Following Use of Dinitrophenol About a Year Before, *J. A. M. A.*, 105:795-796 (Sept. 7), 1935.
8. Dinitrophenol and Cataract, *Current Comment*, *J. A. M. A.*, 105:124 (July 13), 1935.
9. Dinitrophenol Not Acceptable for New and Non-official Remedies: Report of the Council of Pharmacy and Chemistry, *J. A. M. A.*, 105:31 (July 6), 1935.

DISCUSSION

WARREN D. HORNER, M. D. (384 Post Street, San Francisco).—Doctor Rodin's excellent analysis covers the largest series of cataracts of this type collected thus far. The previous reports have not included more than three cases from any one observer, and they have been widely distributed throughout the country.

Since much of the early pharmacologic and clinical investigation was carried out at Stanford University Medical School, it is not remarkable that the suspected remote effects of dinitrophenol would be more numerous in this locality. From this clinic more than 1,200,000 capsules of 0.1 gram each were supplied to physicians and patients during the year from July, 1934 to July, 1935. It is estimated that 4,500 patients in California alone were treated during this period, and that 100,000 persons in this country have used the drug since its introduction as a remedy for obesity. In addition to dosage controlled by physicians, about twenty commercial concerns marketed dinitrophenol or mixtures containing it.

Considering the number of people who have taken dinitrophenol under conditions varying from strict supervision to no supervision at all, it is not remarkable that such a potent drug should produce some untoward effects. The ratio of lens changes to the total number of patients taking dinitrophenol is small, probably less than one per cent and perhaps nearer 0.1 per cent. The number of cataracts is not known, but may be estimated at between fifty and one hundred. If one hundred thousand persons took the drug in the first fifteen months, as has been estimated, the incidence of cataract would be less than 0.1 per cent.

It is remarkable that in all of the cases of dinitrophenol poisoning occurring in munition workers in France during the war, and in thousands treated for obesity since, no case of cataract has been reported. One French writer, Dally, "suspects the toxic action of an impurity in the dinitrophenol, very probably dinitronaphthol."

The lens changes following dinitrophenol appear to be due to some deleterious effect on the lens epithelium. The opacities are first noted just beneath the anterior and posterior capsules. When once begun, they proceed steadily without arrestment until the whole lens is opaque. Local treatment, such as hyperemia by hot applications, diosin and subconjunctival injections, or various general measures as diet, forced fluids, calcium salts, or concentrated vitamin C (ascorbic acid) have failed to influence progress.

No damage to any ocular structure except the lens has been reported thus far.

Extraction of such cataractous lenses is done with no more difficulty than other soft cataracts, and visual results following operation have been excellent.

✱

HANS BARKAN, M.D. (Stanford University Hospital, San Francisco).—Of the thirty-two cases mentioned here by Doctor Rodin, I have seen a number, some of them in private practice and some of them in the Stanford University eye clinic. As he says, the amount or the length of time of use, or the age, or the amount of weight lost, seem to make little if any difference as to whether the patients develop lenticular changes. It is an unhappy circumstance that a drug so carefully worked up, and so carefully checked by the very best scientific men and proceedings, should have proved to be one which certain individuals at least cannot take without this acute disturbance of lens metabolism. There must be an individual idiosyncrasy to it. Certainly, of the large number of patients taking it, few developed cataracts, but in such fashion and so typically that there can be no doubt clinically that just those would not have had cataracts at this particular time if they had not been taking the drug. Doctor Rodin deserves great credit in having carefully collected and proved up the data respecting these cases.

✱

HAROLD F. WHALMAN, M.D. (727 West Seventh Street, Los Angeles).—The tabulation of cases by Doctor Rodin conforms in many respects to a similar grouping of nineteen cases which I have had the opportunity to analyze. Some very interesting and significant facts are thereby revealed, and I would like to urge that physicians who have the opportunity of seeing cases of dinitrophenol cataract send brief notes regarding such to those who are interested in making the tabulations.

First of all, the tables indicate that the individuals in this series did not show what would ordinarily be considered an idiosyncrasy for the drug, but rather a very hearty tolerance for dinitrophenol, as evidenced by the fact that the average length of time of ingestion of the drug was eleven months. With the exception of one case, all have been women and relatively obese. In my own series, where weight loss has been included in the study, all showed considerable reduction in weight, varying from fifteen to seventy-six pounds, averaging about thirty-five pounds over a period of time.

As Doctor Rodin has indicated, there seems to be no relation between the amount of drug taken and the formation of cataracts, nor does the discontinuance of the drug before visual symptoms develop alleviate one from the possibilities of later visual disturbance, as evidenced by the fact that cataracts have formed as late as twelve months after discontinuing the dinitrophenol. This is very disconcerting, to say the least, and would seem to indicate that some permanent damage occurs to the structure of the lens, likely an effect on the capsule of the lens affecting its permeability. The subsequent changes then appear to be one of hydrolysis, as the lens becomes gradually swollen and its fibers disintegrated.

Doctor Rodin did not indicate the amount of drug taken by these patients, but in my own series the daily dose did not exceed that recommended by Stockton and his co-workers, an average of from 100 to 500 milligrams per day.

Another point mentioned by Doctor Rodin, but which is not indicated in his tables, is that the rate of development of these cataracts is extremely rapid in comparison with the cataracts we are accustomed to see. Complete maturity may ensue within a week after the onset of visual symptoms, or it may take many months for the complete development of the cataract. The average, however, is about one month. In this respect they behave very much like traumatic cataracts, where the epithelium of the lens is damaged by a penetrating agent followed by immediate opacification of the lens substance as a result of injury to the capsule, when rapid swelling of the lens ensues. Concurrent with this speedy development of lens opacity and the swelling of the lens, there is an increase in the intra-ocular tension of the eye due to blocking of

the iris angle. This may vary from a few points above normal to acute glaucoma.

General practitioners should be on the alert for visual change in patients taking this drug. The earliest signs are those of an increased index of refraction, which can be detected by the ophthalmologist in a change of refraction in the patient's eyes.

To date no form of medical treatment, either general or local, has resulted in arrest of the process once it has started. These cataracts are, however, amenable to surgical treatment, and the visual results in most cases have been reported as good. With the exception of some instances communicated to me by Doctors Hosford and Hicks, the vitreous body has been unaltered in the early stages of cataract development, when such body can be seen with the slit lamp, and after cataract extraction.

I wish to congratulate Doctor Rodin on having obtained a sufficient group of cases from his colleagues to demonstrate certain constant features observed in these patients.

MEDICINE AND SURGERY IN THE FLEET*

By LUCIUS W. JOHNSON, M.D.†

U. S. S. Relief, United States Navy

WHEN your representative asked me to talk to you tonight, he suggested the subject, "Medicine and Surgery in the Fleet," and I have not been able to improve on that suggestion.

WHAT IS THE FLEET?

As a preliminary step in any discussion, it is good logic to agree on the meaning of the terms that are to be used; so, in this case, I think we should get it straight, just what the fleet is. You may think of it as that aggregation of 160 ships and 45,000 men that recently returned from the Pacific maneuvers. But there is a broader conception of it, expressed in the saying that "the fleet is the Navy and the Navy is the fleet." It implies that everyone in the Navy is a part of the fleet, whether his job for the moment be on a ship, at a desk in Washington, or in one of our distant island possessions. Each one plays an essential part in the preparations which make it possible both to move and maintain the fleet in readiness to fight wherever it may be needed.

This broad definition of the fleet gives me great latitude in what I may say. But it also exposes me to certain hazards. On the one hand, is the peril of wearying you with excessive praise of my own outfit. On the other hand, is the danger of putting you to sleep with a dry statistical summary of accomplishments. I will try to steer a careful course, avoiding both of these extremes.

THE SHIP SURGEON A CENTURY AGO

To get a proper slant on this job of being a doctor in the Navy, let us take a brief glance back to the times when the pay of doctors there was small, their equipment meager, and their prestige little greater than that of a guinea-pig in a modern laboratory. An intimate picture of this is contained in Smollett's *Roderick Random*, a vivid delineation based on his own experiences as a

* Read before the Hollywood Academy of Medicine on September 19, 1935.

† Editor's Note.—The author of this article, Lucius W. Johnson, M.D., is a Captain in the Medical Corps, United States Navy, and Senior Medical Officer on the U. S. S. Relief.

surgeon's mate in the British Navy with Admiral Vernon's naval expedition to Carthage in 1741. No doubt most of you have read it. In the early days of the United States Navy, the doctor was hired for service on the individual ship and was selected by the captain. His pay was about \$25 a month. Later, by many years, the pay was raised to \$75 a month; the ship's doctor was recognized as an officer, and he was allowed to wear a uniform.

PRESENT-DAY MEDICAL DEPARTMENT ORGANIZED IN 1871

In 1871 the Medical Department of the Navy was organized, with the Bureau of Medicine and Surgery in charge. Five grades, with relative rank, were established. We now receive the same pay, and are promoted step by step with our brother officers in other branches.

These improvements in the material welfare of the doctor in the Navy have accompanied great advances in sanitation, and the practice of medicine and surgery on board ship, which have paralleled similar progress on shore. Naval communities are no more tolerant of mediocre treatment than are other people. They demand the best and they receive it.

MORALE OF A MILITARY ORGANIZATION DEPENDENT ON CARE OF THE SICK AND WOUNDED

"Of the diverse gifts which have been bestowed upon mankind, the healing art is one of the most necessary and most conducive to the public good." Many of you will recognize these words of Robert Burton, and they are no less true today than they were three hundred years ago when he wrote them. Especially are they true of the modern ship of the Navy. The Byzantine Emperor, Leo, wrote in his treatise on military science, "Give all the care you possibly can to your wounded, for if you neglect them you will make your soldiers timid and cowardly before a battle, and not only that, but your personnel, whom you might preserve and retain by proper consideration for their health and welfare, will be otherwise lost to you through your own negligence." In those early days it was recognized, as it is today, that care of the sick and wounded is essential if the morale of a military organization is to be maintained, and those who administer our Navy are doing all they can to provide adequately for the men of the service. The mission of the Medical Corps, as stated by Gatewood, is to keep as many men at as many guns as many days as possible.

A NAVAL MEDICAL OFFICER'S CAREER

The career of a naval medical officer may be divided into three parts: that spent on ships; that spent on foreign shore duty; and that spent on shore within the United States. The first year after entrance into the medical corps is the officer's interne year in one of our large naval hospitals, which are approved for interne instruction by the American College of Surgeons and the American Medical Association. After that he will have two or three years at sea on a ship.

This will be followed by about three years of hospital duty in the United States, and he will usually then go for two years of shore duty in the Philippines, Guam, China, Panama, or some other outlying post. Specialization is encouraged; and if he shows any desire to enter a special branch, he will be sent to the Naval Medical School in Washington or to some of our large university medical schools for postgraduate instruction.

A certain practitioner, questioned as to his specialty, replied that he limited his practice to acute and chronic diseases and injuries of men, women and children. The medical officer on board a Navy ship covers a field almost as broad. He must be an all-round specialist, for he is quite likely to be put in a position where he must, alone, diagnose and treat all sorts of diseases and injuries. The unfortunate plight of a friend of mine illustrates this point. About twenty years ago he was the medical officer on a ship which was surveying the south coast of Cuba. One of the crew was taken sick with what the doctor suspected to be acute appendicitis. He told the captain that immediate operation was required, but that he did not feel competent to do it. They decided to stop work and proceed at full speed to the nearest hospital, which was at Panama, two days away. The man was delivered to the hospital and the ship returned to her station with a loss of five days, which was important because the hurricane season was at hand, when the work must stop for the year. No sooner had they resumed work than another man came down with appendicitis. Once more the work was halted, and the ship headed for Panama; but this time the captain sent a radio to Washington, demanding a more adequate medical officer and the doctor resigned.

ANALOGY TO SMALL-TOWN PRACTICE

The work of a doctor on a ship may be compared to that of one practicing in a small town; but all his patients are men, and they are mostly between twenty and thirty years of age. The crowded conditions on board ship favor the spread of contagious diseases, especially those carried by the secretions of the nose and throat. The intricate machinery among which they work and live carries its own hazards of injury. The powerful explosives which they handle and the tremendous forces which are harnessed, sometimes inadequately, on a modern ship of war add their dangers to those which usually threaten men who follow the sea. Add to these the frequent and extreme changes in climate to which the crews of the ships are exposed, and you will realize that the doctor must be prepared to handle any problem in medicine, surgery, sanitation, or of the specialties.

HOW SEA DUTY AFFECTS THE NAVAL SURGEON

The effect of sea duty on the doctor himself is to bring out the fundamental characteristics of the man. One can get by with so little work that some become like the electric button that does no work unless it is pushed. Others achieve almost completely suspended animation, like the fly em-

bedded in amber. It really takes a lot of self-control and determination for a doctor to complete two or three years on board ship without deterioration, but most doctors realize this fact and strive earnestly against the enticement of indolence. A former surgeon-general of the Navy, W. P. C. Barton, wrote that: "The unsettled and wandering life on board ship not only deters the gratification of professional ambition, but absolutely generates an inanition of mind very inimical to solid improvement of any kind." Yet the majority of our doctors take advantage of their cruises at sea to keep abreast of the medical literature, visit clinics and hospitals, and otherwise avail themselves of the professional facilities offered by the various ports which they visit. While I was a member of the Board, in Washington, which examines naval medical officers for promotion, I observed that many of those who were at sea passed with very high marks and showed evidence of real professional advancement while on board ship.

AUTHOR'S OWN EXPERIENCE

Twenty-seven years ago, when I considered entering the Medical Corps of the Navy, Dr. Henry W. Cattell, with whom I had the good fortune to be associated at that time, told me, "If you do only a little bit more work than you are required to do, you will win distinction in the Navy." The level of professional activity among us is now infinitely higher than it was in those days, but his statement is still true and, if you will give it careful consideration, you will find that it applies in your sphere of activity as surely as it does in mine.

HOW DIFFERENT PORTS AFFECT THE SICK LIST

Each port visited by the fleet has its individual effect on the sick list of the ships. As an illustration of this point, consider the contrast between Honolulu, which the fleet visited this spring, and a certain port in Central America, where it stayed for a time last year. In Honolulu was a kindly, friendly people, speaking our own language, who delighted to entertain our men with luaus and dances. The principal pleasure for all of us was found in the surf and sunshine of the beaches. At the other port was an alien and unsympathetic people, who had no interest in our men except in the profit they could make. They offered as amusements prostitution, drinking and gambling. It requires little imagination to understand how diversely these two visits were reflected in the health of our men and in the number of patients sent to the hospital ship.

Many years ago Dazille wrote at length on the thesis that an understanding of the condition of a country can be reached quite accurately through a knowledge of the diseases of its people. (*Observations Générales sur les Maladies des Climats Chauds*, etc., Paris, 1785.) It is a parallel truth that one can gauge with precision the condition of the fleet, or of an individual ship, by observing its sick list. The discipline and the contentment of its men, and the efficiency and wisdom of the medical officers of a ship are all mirrored in its

sick list. We who serve on the hospital ship are ideally placed to appreciate this fact and to estimate the conditions on the various ships of the fleet.

U. S. S. "RELIEF": HOSPITAL SHIP OF THE FLEET

The U. S. S. *Relief* serves as the hospital ship of the fleet, and she is a complete floating hospital with a normal capacity of 370 patients. There have been hospital ships attached to the great navies ever since the days of the Invincible Armada in 1588, and probably even before that; but the *Relief* is the first vessel to be built from the keel up for this particular purpose. She was placed in commission December 28, 1920, and has since been in almost constant attendance on the fleet. Her function is to cure the sick and to return them to their ships as quickly as possible; also to provide treatment in all the special branches, laboratory facilities, and other needs for medical aid. Her reputation for the excellence of the work performed by her staff is most enviable. We ourselves did not realize how far this reputation had spread until recently, when—believe it or not—an injured seal flopped up on the gangway. That was most gratifying, for, of course, a seal would never stoop to flattery. So we sewed up the lacerations, applied a dressing and returned the seal to the water. I am told that it came back for several days, at 8:45 a. m. sharp, for more dressings.

But I must forego the privilege of setting forth at greater length the excellence of the hospital ship, because my particular job is that of senior medical officer of the *Relief*, and I must not tire you with too much praise of my own child.

AN EXAMPLE OF EMERGENCY SERVICE

Before leaving this subject, I wish to describe one incident that illustrates how the hospital ship works. On June 4, we were en route to San Pedro from Honolulu. The various units of the fleet were engaged in a strategical problem, and the *Relief* was approximately in the center of the area of activity. The heavy cruiser *Portland* was about seventy miles to the north of us when one of her men suffered a perforation of a peptic ulcer. She immediately notified the *Relief* by radio, and the two ships steamed toward each other at full speed. By the time they met, the operating room was ready. The patient was transferred and operated on at once, less than five hours after his trouble began. You all know how important the time element is in this ailment, and will realize how large a part this early operation played in the man's rapid recovery.

ONE-SIDEDNESS OF NAVAL PRACTICE

Working with men patients only, as many of us do in the Navy, does tend to make us somewhat one-sided in our professional development. A good friend of mine recently reminded me of a story on myself which illustrates this point. After I had been doing surgery for some years, an officer persuaded me to operate on his wife, which I did with considerable diffidence, since my work had been almost entirely with men. As I

opened the peritoneum a perfectly normal ovary popped out. I was utterly dismayed and said, "What in the devil is that thing?" My assistant, who always earned a perfect mark in diplomacy, said, "I thought at first it was an ovary, but maybe it isn't."

FOREIGN SHORE DUTY

Foreign short duty may be in the Philippines, Guam, China, Cuba, or Samoa. Until recently we had medical officers also in Haiti, Dominican Republic, Nicaragua, and the Virgin Islands. Most of us regard these tours of duty as delightful interludes. If one stays too long in one place he comes to the time when he has solved most of the problems, knows most of the answers and understands most of the people that he must do business with. He is liable to settle into a rut. In the Navy, when we reach this stage they pull us up by the roots and transplant us to a new field where there are new problems to solve, new personalities to figure out and new worlds to conquer. It is wonderfully stimulating to tackle a fresh job, and I believe it helps to keep us young and enthusiastic.

CARE OF NATIVE POPULATIONS

In these foreign stations we have not only the usual Navy work, but also the care of native populations, and great problems of sanitation and public health administration. Tropical medicine offers most interesting fields of inquiry in which some of our most successful battles with disease have been fought. The countries which we have occupied have always profited greatly in public health, sanitation, hospital facilities and control of their special diseases. The work of Stitt in the Philippines, of McLean, Butler, and Melhorn in Haiti, and Paul Wilson in Panama, are achievements to which we point with legitimate pride. In Haiti, for instance, when we occupied it in 1915, we encountered most primitive sanitary conditions. There was no sewerage system in the cities, and refuse was simply thrown into the streets to rot; there was no public water supply except shallow wells and polluted streams; nor was there mosquito control, or vaccination or other action to prevent disease. The practice of medicine was most primitive and, outside of a few favored ones in the large cities, few of the inhabitants had medical advantages much superior to those medico-religious rites which they brought with them from Africa three hundred years ago. When I left the country, in 1931, there were modern hospitals in the eleven largest towns. Every district of the country had its organized sanitary and clinic service. During that year there were over 10,000 admissions to hospitals, and 1,300,000 visits to dispensaries and rural clinics. Every considerable town had its water supply, its refuse disposal service, its mosquito control work, its dispensary and its consultation service, whereby specialists could be quickly brought by plane, automobile, or mule-back, for any serious medical, surgical or sanitary emergency. There was a well-equipped medical and dental school, with teachers trained in the best schools of Canada, France, and

the United States. Some of the most satisfying experiences of my many years of medical work came to me while on those mule-back clinics in the remote mountain districts of Haiti. Ever since April, 1903, when I commenced my internship in old Blockley Hospital in Philadelphia, I have been continuously associated with the care of the sick, wounded and needy, but in no other place and at no other time have I had so truly the feeling that I was a real benefactor to those under my care as during those three years in Haiti.

FUNCTION OF THE NAVY IN MAJOR DISASTERS

The Navy is frequently called upon to aid in relief work following disasters of great magnitude. Such calls have been eagerly accepted as opportunities to demonstrate the value of the training and equipment of our organization. Medical officers have played an important part in this work, and their success has often been the subject of favorable comment. Conspicuous examples of this sort of work have been the Messina earthquake and the Armenian massacres in 1909; the earthquake in Guatemala City in 1917; the earthquake and tidal wave in Chili in 1923, and the Japanese earthquake in the same year; the hurricane in Santo Domingo City, D. R., in 1930. Excellent work was done by two medical officers after the Nicaraguan earthquake of 1931. The assistance given by the Navy, and particularly the part played by the medical department, after the Long Beach earthquake is probably still fresh in your minds. In all these disasters we have enjoyed the most harmonious coöperation with the American Red Cross, and we are happy to acknowledge the value of the lessons we have learned through association with the disaster experts of that admirable organization.

UNITED STATES MARINES

Wherever the United States Marines go they are accompanied by and served by members of the Medical Corps of the Navy. Our doctors have participated in all their glorious exploits, taking care of their sick and wounded in Pekin, Samar, Coyotepe, Belleau Wood, and many other fields of action. As soon as the Marines have landed and have the situation well in hand, the Navy medico goes to work to improve sanitation, to give medical aid to the populace, and to supply to the natives the benefits of modern medical knowledge. The Marines have freely acknowledged that the good-will and confidence of the people earned by the Navy doctors have made much easier the task of administering the government of occupied countries.

MEDICAL CORPS OF THE NAVY AIDS IN LAND SANITATION

Yaws, gangosa, beriberi, syphilis, malaria, intestinal parasites and other tropical killers, have been brought under control by naval medical officers in many occupied lands. Our critics are frank in saying that the very success of this public-health work brings in its train the problems of overpopulation and inadequate food supply. They cite Puerto Rico and Guam as examples of this. But

public opinion has yet to reach the stage where it will approve restriction of public-health work because it saves too many lives.

In all this work in our island possessions and among alien peoples, we try always to maintain the attitude of the bantam rooster who was the idol of several hens. One day he found a large goose egg in the barn yard and was filled with admiration of its size. He rolled it into the hen-house and said to the assembled hens: "Now I don't want to belittle and I don't want to criticize. I just want to show you what others are accomplishing with the same equipment."

SHORE DUTY IN THE UNITED STATES

Duty on shore in the United States is usually at hospitals, dispensaries, training stations, navy yards, or recruiting stations. The purpose of all these is to serve the fleet, to maintain its men in the best of health. There are eleven hospitals, the largest of which is that at San Diego, with about 1,200 beds. In a recent year (1933), there were 51,606 admissions to the sick list for all causes, with a total of 1,516,658 treatment days in naval hospitals. Every effort is made to keep these institutions abreast of the finest that can be found in modern hospitals, both in equipment and in training of the personnel. I do not want to spend too much time in detailed description of this aspect of our work, because it parallels too closely your own daily rounds.

CONTACTS WITH PRACTITIONERS IN CIVIL PRACTICE NEEDED AND APPRECIATED

It is one of the unfortunate features of our work that we are pretty completely insulated from contact with our professional brothers in civil life. We miss those stimulating, friendly contacts which prevent your work from ever becoming a mere routine. But of late years the increasing extent to which we endeavor to provide professional service to the families of service personnel has brought pleasant relations in many localities. In the San Pedro-Long Beach area, for instance, the Harbor Branch of the Los Angeles County Medical Society has for several years bestowed the gracious compliment upon our corps of electing one of the medical officers attached to the naval dispensary as its vice-president.

In one year this dispensary handled 600 obstetrical cases, 350 major operations, and 60,000 office consultations. A great part of this work was previously done by civilian physicians, with little or no compensation, and they express themselves as being happy in their relief from this burden. These services for the Navy families are also of great value to the fighting man because, while absent from home, he knows that in case of illness his dependents are assured of medical care and hospitalization if necessary. To illustrate, a story is told of an old Navy captain who refused leave to a young officer who desired to visit his home and be present at the birth of his first offspring. The captain's reason for refusing was that, while it was necessary for the young officer to be present at the laying of the keel, the doctor would attend to the launching. So the sailor man

of today can lay the keel during his shore leave and proceed to sea confident that the Navy doctor will take care of the launching.

ORGANIZATION OF THE MEDICAL DEPARTMENT OF THE UNITED STATES NAVY

It may interest you to know something of the organization of the Medical Department of the Navy. The Surgeon-General is chief of the Bureau of Medicine and Surgery, which directs the activities of this department. The incumbent is Rear-Admiral Percival S. Rossiter, M. C., United States Navy, whose strong and intelligent administration has greatly added to the prestige of the Medical Corps. At present there are approximately 870 medical officers, 200 dental officers, 130 pharmacists, 455 nurses, and 4,000 men of the Hospital Corps, under the direction of the Bureau of Medicine and Surgery. Every effort is made to secure the best available men. For the Medical Corps they are sought in the graduating classes of Class A medical schools. They must come well recommended from their own schools, and we seek men who have also been active in other branches than the purely scholastic. A careful investigation of all sides of the man's life is made. This results in weeding out many candidates, and the very rigid physical examination eliminates many others. Then comes a very thorough written examination in various professional subjects, which is competitive, all candidates having the same questions at the same time, under the observation of naval medical officers. The examination papers and all the data secured from these various sources are then forwarded to Washington, where the Board grades all the candidates, and commissions are offered to those at the top of the list. During the four years that I was on this board in Washington, we had always to choose from at least five times as many candidates as could be appointed. Those commissioned are ordered to various naval hospitals for their interne year. At the end of that period, if the doctor does not like the Navy, or the Navy does not like him, he may resign with no hard feeling on either side, although very few do so. After a cruise of three years at sea, the young doctor usually returns to one of the hospitals for duty, and if he has any inclination toward a specialty he is tried out and encouraged to develop his ability. The Bureau desires to assist those who are anxious to develop themselves in a chosen field and, in four years, has given special courses in various civilian institutions to 225 medical officers, 20 dental officers, 9 pharmacists, 26 nurses, and 19 hospital corps men. During the same time 60 medical officers, 30 dentists, and 150 hospital corps men took courses of instruction at the Naval Medical School in Washington, D. C.

PROMOTIONS IN THE MEDICAL CORPS

Promotion in the Medical Corps of the Navy is entirely by selection. When the doctor enters the service he is assigned a running mate in the line of the Navy; and, as the line officer becomes eligible for promotion to the various grades, the medical officer also becomes eligible for promotion in

his corps. Each year a board of senior officers of the Medical Corps considers those who have become eligible and selects the ones who are to be promoted. This plan was started, for the higher grades, in 1926, and has worked so well there that it has recently been extended to include all grades. It makes our job a highly competitive one and keeps every man on his toes in the effort to excel and to win promotion.

IN CONCLUSION

There are many other aspects of our life and our work that I would like to tell you about, but I have already taken too much of your time. Perhaps I have helped you to understand why we who are in the Navy love it, or perhaps you may have found it, like the sailor's parrot, far-fetched and full of nonsense. In any case, it has been a delightful experience for me to spend this evening with you.

U. S. S. *Relief*, San Pedro, California.

URINARY EXTRAVASATION FOLLOWING URETHRAL STRICTURE*

By CARL F. RUSCHE, M.D.
AND
SAMUEL K. BACON, M.D.
Hollywood

DISCUSSION by Nathan G. Hale, M.D., Sacramento;
Henry A. R. Kreutzmann, M.D., San Francisco; Louis
Clive Jacobs, M.D., San Francisco.

A GENERAL survey of medical literature shows a relative infrequency of any comprehensive treatise on the subject of urinary extravasation. This paucity of material may be due to the assumed fact that the present records are sufficiently broad of view to cover the subject and remain as a criterion of excellence; to the fact that the comparative magnitude of this disease has not been fully and vividly appreciated; or, finally, to the fact that only a limited number of urologists have been privileged to attend large clinics, and observe and estimate the frequency and importance of the condition.

PURPOSE OF THE AUTHORS' PAPER

Feeling this gap in medical writings, we are taking the opportunity of offering a personal contribution, having for its object the successful conduct of an extravasation of urine occurring external to, and limited by the urogenital diaphragm. This is not because we differ with other writers in the main, but rather because we absolutely agree with them in general and only wish to indicate our variations in the detailed management of this urgent condition.

Several of the old textbooks are entertaining, although not particularly enlightening in regard to urinary extravasation. The descriptions of this disease include such symptoms as violent straining, sudden sensation of giving way, followed by urine gushing into the surrounding connective

tissue. These dramatic accounts had never particularly formed a part of our impression of the observed sequence of events; however, very recently we have been fortunate to see a young adult with the urinary bladder distended to the umbilicus, unable to void, yet after straining most violently, empty the bladder and immediately distend the scrotum, as one would inflate a football.

Before citing in detail the case history we wish to report, we would like to make some general observations on the subject of urinary extravasation.

SYNONYMS OF THE TERM "EXTRAVASATION OF URINE"

In the study of this subject there seems to be a great confusion of terms. We do not question the correctness of the definitions accepted by others, but, since a generally accepted definition is the first requisite for proper scientific comprehension, we believe it best to name the terms associated with this disease so that there will be a denominator of common definition. The term "extravasation of urine," as used in this paper, shall be essentially synonymous with such expressions as:

1. "Urethral or periurethral gangrene, with or without infiltration";
2. "Diffuse gangrenous cellulitis of urethral origin";
3. "Periurethral cellulitis";
4. "Diffuse phlegmonous inflammation";
5. "Periurethral phlegmon";
6. "Periurethral abscess, with urinary infiltration."

As our title discloses, we do not intend to deal with every aspect of urinary infiltration; we specifically limit ourselves to emphasizing that, in the majority of cases, urethral *stricture* is the significant causative factor of this disease; and we, therefore, exclude a group of important entities due to the escape of urine into tissues above the triangular ligament. We realize the unusual fact that an extravasation of urine may be present even though the urethral caliber be within normal limits, and we accept the theory of urethral infection.

The facial planes of the perineum and genitals control the advancement of urine escaping from the normal channel. The relationship between a urethral perforation and these barriers determines the course of extravasation.

The diagnosis of urinary extravasation can be made by the urologist as rapidly as that of any other entity in this specialty. The symptoms and findings require no great process of elimination.

The clinical history and management of an average patient with this condition can be described most concisely by following the methods of Martin and Soloway, and we deviate only where our personal experience has shown some variation.

A TYPICAL STRICTURE CASE

In the typical stricture case, a patient possibly had a previous gonorrheal infection treated with a strong solution or remained untreated, or neg-

* Read before the Urology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

lected to subject himself to urethral dilatation for stricture. Symptoms of frequency, dysuria, loss of force, and narrowing of the urinary stream, have been present for several years. Finally, exposure to cold, alcohol, sexual excess, or unusual emotional excitement precipitates acute urinary retention. After a characteristic delay for the relief of this situation, a physician, usually without adequate urologic equipment, is consulted. Attempts to catheterize the patient with rubber or metal catheters, and with perhaps a metal sound thrown in for good measure, may complicate the stricture by adding hemorrhage, false passage, and infection. Occasionally the urine is withdrawn by suprapubic aspiration through a needle or trocar, and the patient is instructed to go to a urologist, to a hospital, or to his home and take hot sitz baths.

THE PICTURE WHEN COMPLICATIONS ARISE

Remembering the painful ordeal of previous urethral instrumentation, and temporarily benefited by the emptying of his bladder, the patient disregards the instructions to go to a urologist and have his stricture properly treated. A period passes and a repetition of urinary retention occurs. Now it presents a different picture. The scrotum is enlarging; the skin of the penis is swelling; for hours, or for a day or two, the patient has withheld fluids; he can no longer procrastinate. At this time an ambulance usually must call at his residence and deliver him to a hospital for immediate urologic care.

The resident physician and interne have to deal with a serious emergency. The patient is dehydrated and emaciated. Fetid breath, dry red tongue, fever, tachycardia, rapid respiration, possibly pulmonary râles, usually distended bladder, swollen, painful perineum, distended, glistening reddish-brown scrotum, perhaps with the epithelium separating like a broken blister, foul odor about the genitals, penile edema causing the meatus to be hidden, and bilateral subcutaneous infiltration suprapubically, illustrate the clinical aspect of an advanced urinary extravasation.

There is only one way of dealing with a patient like this, and that is to resort to immediate radical surgery. Unfortunately, not all physicians and urologists adopt this heroic treatment. Only a few months ago, one of our professional acquaintances stated, in a telephone conversation, that he had just completed the procedure of attempting to aspirate an extravasated patient. He admitted that, although he had been very thorough in trying the needle in many areas, fluid did not return, the scrotum remained distended, and the sufferer was not relieved.

To temporize, to delay, or to falter upon an occasion characterized by urinary infiltration is almost a display of unjustifiable ignorance. Prompt and wide use of the knife is the only procedure that will deal adequately with the exigencies of the case.

Some three years ago we were privileged to be with Dr. Robert V. Day when he was observing an extravasated patient the morning following sur-

gery. He turned to the resident urologist, and asked: "Doctor, do you think you cut enough?"—although this doctor had already incised through a great area of tissue. The surgeon glanced once more at the bare testicles and gaping wounds; then with apologies, replied that he thought he "had made a sufficient number of incisions." Doctor Day waited courteously but impatiently through the answer; then retorted with the statement, which we consider axiomatic, "When you arrive at that conclusion, you had better close your eyes and slice some more."

TREATMENT OF URINARY EXTRAVASATION

The treatment of urinary extravasation calls for three courses of action:

1. Diversion of the urinary stream;
2. Multiple incisions of all infiltrated areas;
3. Urethral dilatation.

To those surgeons who have already incorporated these courses in their management of such cases, we extend our compliments. Those who remove the prostate suprapubically in some cases and through the perineum in others, will understand our personal variations, but will to a greater or lesser degree endorse the following type of surgery. Our routine must not be considered the only correct procedure, and we desire to appreciate the records of those surgeons who advocate perineal cystostomy. In fact, we ourselves occasionally have recourse to this operation.

AUTHORS' CHOICE IN PROCEDURES

The following order of procedure (arranged in sequence) essentially summarizes our own choice in the management of urinary extravasation cases:

1. Intravenous saline;
2. Urethral calibration;
3. Spinal anesthesia;
4. Suprapubic cystostomy.
5. Multiple incisions of extravasated areas;
6. Postoperative potassium permanganate continuously;
7. Hot sitz baths early;
8. Urethral dilatations;
9. Indwelling urethral catheter;
10. Removal of suprapubic catheter;
11. Periodic urethral dilatation.

IMPORTANCE OF IMMEDIATE SURGICAL INTERVENTION

To reemphasize the necessity of immediate surgery is more important than to stress any particular item peculiar to any one urologic surgeon, provided that the patient receives free and adequate incisions for drainage.

While the local areas are being examined and shaved, an intravenous solution of normal saline will assist in the relief of dehydration. Ample evidence concerning the urethral caliber can be obtained with a soft rubber catheter, but even this examination is not essential at this time, as the urethra should not be traumatized. It is a fact that upon occasions when perineal diversion of



Fig. 1.—Extravasated scrotum and penis.



Fig. 2.—Bladder exposed through transverse suprapubic incision.



Fig. 3.—Bisected scrotum and dissection throughout scrotal tissue.

the urinary stream is contemplated, even the passing of a guide such as a small filiform will frequently cause the urethra to bleed.

SUPRAPUBIC CYSTOSTOMY

In the majority of instances we resort to suprapubic cystostomy, because we think it is sound therapy and it is not a dangerous operation. In this disease there is not, in our opinion, a single advantage in the transverse over the longitudinal incision. This operation can be a fifteen- or twenty-minute procedure, and in an occasional case we have divided either one of those figures in half. The operating time certainly should be minimized. Through a two-inch incision with a distended bladder, which is the usual finding, only a small area of the bladder at the topmost portion need be exposed. Open, aspirate, and examine the bladder, and allow a Pezzer catheter to remain in place. For exponents of vesical decompression, the technique of inserting a trocar after the bladder is exposed, removing the obturator, and passing a No. 22 Pezzer through the sheath, removing the sheath and attaching this drainage tube to a decompression apparatus, should not be considered a novelty.

Following suprapubic drainage, the patient is placed in the lithotomy position. Completely bisect the scrotum, dissect throughout each half and resort to additional incisions elsewhere in the scrotum, penis, and suprapubic areas, if there is the remotest question of their necessity. Necrotic, or gangrenous tissue may be excised. Nature, however, is a good judge of how much tissue to cast away.

POSTOPERATIVE PROCEDURES

From what we can ascertain from the literature or in direct communication with urologists, there are minor variations in the postoperative methods of treatment in individual clinics. A continuous drip of potassium permanganate through tubes placed into the wounds, in a similar fashion as advocated in the Carrel-Dakin program, is advisable. It should be borne in mind that hemorrhage may be associated with sloughing tissue.

When the patient can be placed in a hot sitz bath two to three times a day, convalescence will be particularly shortened. The benefit of hot water has been strikingly impressed upon us very recently. One extravasated patient, considered to be

fairly rapidly approaching death, was for days at a time allowed to remain in a specially constructed bathtub containing a hammock. That patient recovered.

Nature is kind to these unfortunate individuals. Scrotal symmetry is frequently the rule. Skin grafting is rarely required. To assist and perhaps hasten the union of the skin edges, one may keep the skin somewhat separated from the underlying parts by daily application of gauze strips.

When the urethral and periurethral infection and edema of the penis have subsided—which requires approximately ten days—then urethral dilatation is started. From our experience, we personally emphasize the importance of interval dilatation, gradually and slowly increasing the urethral caliber. Upon arriving to approximately a No. 16 Fr., a soft-rubber catheter should be used as an indwelling tube, and the suprapubic cystostomy wound is allowed to close.

In the above description we have not mentioned the technique of dealing with the urethral stricture at the time of the extravasation operation. It is our opinion that cutting the stricture, internal urethrotomy, or even passing the various guides before perineal operation, all add trauma. These strictures soften, and the inflammation and infection recede when one employs this conservative method. Certainly, without a cutting operation into the urethra no more scar can be produced. The necessity to resort to a retrograde method borders upon the unusual in our experience.

To demonstrate many of the above ideas, which are in no way original with us, a case of urinary extravasation due to urethral stricture will be summarized briefly and the preoperative appearance, the surgical technique, and the postoperative management will be shown in motion pictures.

REPORT OF CASE

History.—A male, age sixty-nine years, was admitted to the hospital March 4, 1934. He complained of scrotal swelling for ten days, a mass in the lower abdomen for ten days, and a slow, dribbling, burning urinary stream for fifteen years. Some thirty years ago he had gonorrhea, which had been treated by a druggist.

Physical Examination.—Revealed an elderly white male, acutely ill and in severe pain. A cystic mass (Fig. 1), extending to the umbilicus, was believed to be the urinary bladder. The skin of the penis appeared edematous and the glans penis was scarred. A soft-rubber catheter met an obstruction in the bulbous portion of the urethra. The

scrotum (Fig. 2) was reddish brown in color and was distended to approximately the size of an indoor baseball.

Diagnosis.—Urethral stricture with retention and extravasation of urine.

Operation.—March 4, 1934, the afternoon of day of admission, under spinal anesthesia, a transverse suprapubic cystostomy was executed (Fig. 3), with an adequate drainage of all extravasated areas (Fig. 4), by multiple incisions.

Postoperative Management.—This consisted of continuous hot potassium permanganate dressings; ambulation on the fifth day, with hot sitz baths; introduction of a filiform bougie to the bladder and strapped in the urethra on the seventh day; urethral dilatation carried out up to a No. 6 Fr. silk catheter on the thirteenth day (Fig. 5). Interval gradual dilatation followed, until a No. 16 Fr. soft-rubber catheter could be admitted as an indwelling tube. Then the suprapubic Pezzer was removed. At the end of approximately two months (Figs. 6, 7, and 8) the urethra had been dilated to a No. 26 Fr. and the wounds were essentially healed; the patient was discharged with instructions to return for periodic soundings.

CONCLUSIONS

1. This paper is a further contribution for the express purpose of emphasizing the gravity of urinary extravasation.

2. In the majority of cases, neglected urethral stricture is the significant causative factor of extravasation.

3. Urinary extravasation demands immediate radical surgery. No palliative measures are justifiable.

4. There are three paramount courses of action, namely: (1) divert the urinary stream; (2) multiple incisions of all infiltrated areas; and (3) interval gradual urethral dilatation.

5. Dealing with the stricture should be referred to a later time when a process of slow dilatation will produce a more satisfactory result.

6. Suprapubic cystostomy is a highly satisfactory procedure to divert the urinary stream; perineal cystostomy is not to be condemned, but any operation directed toward cutting the stricture at the time of the extravasation, in our opinion, is unwarranted.

1680 North Vine Street.

DISCUSSION

NATHAN G. HALE (1127 Eleventh Street, Sacramento). Relating to "the complete confusion of terms," "extravasation" is commendable; the others superfluous, since most of the terms mentioned define degree of extravasation and end-results. Except the lethal usually resulting from the untreated case and the prolonged morbidity of the imperfectly treated case.

The authors deviate from concise management as outlined by the textbooks, and so they should. Each case presents different problems, but all cases demand the immediate drainage best suited to the needs of the patient's immediate emergency, plus adaptability of the physician in charge to carry out that procedure. Stricture, the causative factor, is of minor importance after the extravasation. There is no undilatable stricture—some are more resistant than others. Let us remember, and at this point pay due homage to Keyes, who, in his textbook, said, "Cleanliness is godliness, but gentleness is better." Gentlemen, fewer papers on this subject would have to be written if Keyes' rule or axiom were more closely followed. Immediate radical surgery, after the extravasation has occurred, is really conservative surgery, no matter how radical.

The three principles approved by the writers, (1) divert the stream, (2) multiple incisions, (3) do a urethral dil-

ation, could be changed to: (1) drain the extravasation; (2) reestablish the urinary course to the exterior; and (3) prevent secondary infection.

To the urologist the evidence of extravasation is apparent. The method: Proceed without delay. Let us disseminate this information to our brethren, and congratulate the authors on their paper.

✽

HENRY A. R. KREUTZMANN, M.D. (2000 Van Ness Avenue, San Francisco).—The authors correctly reiterate the advice to cut and keep on cutting wherever the urine has escaped into the surrounding tissue from a ruptured urethra. The urine itself is toxic, and the fact that it is always infected results in tremendous absorption of poisonous products into the system. The only possible method of removal is, as the Doctors have so emphatically stated, by free drainage with multiple incisions.

The treatment for extravasation of the urine has been very concisely outlined and presented. In this paper no mention is made as to the duration of time the suprapubic drainage should be continued. We have found it advantageous to continue the diversion of the urinary stream until the urethra has been dilated to such a size that filiforms are no longer necessary. This has a twofold purpose. It prevents edema of the strictured area, with its resultant acute retention. In the second place, it prevents absorption of the infected urine, thereby lessening the danger of chills and fever.

Immersing the patient in hot baths is an excellent aid in treatment. Still better, is to put a mild solution of potassium permanganate in the tub. This gives alleviation of pain and at the same time cleans the multiple wounds.

✽

LOUIS CLIVE JACOBS, M.D. (450 Sutter Street, San Francisco).—Doctors Rusche and Bacon emphasize the importance of stricture of the urethra as a contributing factor in rupture with extravasation of urine. It has been my experience that extravasation of urine, as a result of the neglected urethral stricture, is not uncommon. Patients with stricture of the urethra should receive adequate treatment, and be impressed with the importance of reporting to their physician for the introduction of sounds at stated intervals. I usually keep my patients under observation for a period of years, dilating their canals to F. 28. The frequency of treatment depends upon the individual's reaction thereto.

In reviewing case histories, I find many similar to those reported above. Three to ten days have already elapsed before hospital relief is sought, and the record sheet shows urethral instrumentation associated with traumatism. One patient was hospitalized for over three months. His recorded findings were similar to the case history that Doctors Rusche and Bacon report; but his extravasation and infiltration were so extensive that gangrene was present. The perineum, scrotum, testes, and abdomen were involved, with redness and edema of the skin extending to both axilla and along the thighs. He later required plastic surgery.

It is not infrequent to have patients with a brawny swelling located in the perineum, associated with abscess formation, as a result of even a slight abrasion of the urethral walls. In degree, the rupture, which is usually located upon the floor of the urethra, varies from the smallest laceration to a complete tear with solution of the continuity of the urethra, and subsequent disintegration of adjoining tissues. Ultimately urine extravasates into the perineal space and along the planes of fascia to the adjacent structures. Whenever a rupture of the urethra is neglected, some infiltration of urine will occur; which is always followed by sepsis. Even in the presence of sterile urine, the infiltrated area becomes septic; the character of the urine alone influencing the length of time before the patient becomes comatose. Thus, it is evident that an early diagnosis is necessary, so that proper surgical procedures may be instigated.

Such procedures have been thoroughly enumerated by Doctors Rusche and Bacon, whose technique in the treatment of such patients is sound.

STUDIES IN RICKETS*

CLINICAL FINDINGS IN 1,000 PRIVATE PATIENTS

By C. ULYSSES MOORE, M.D.

AND

H. G. DENNIS, M.D.
Portland, Oregon

RICKETS has been defined as a disorder of nutrition affecting the body as a whole and, in particular, the muscular, nervous, and osseous systems. The chief etiologic factor is now recognized as a deficiency of vitamin D. In man, vitamin D is formed by the action of ultra-violet rays of a certain wave length (260-315 Mu.) upon the lipoids found just beneath the surface of the skin. These lipoids contain the provitamin, ergosterol, which is changed to its isomere, calciferol,² or vitamin D. This vitamin is the catalyzer which causes the two minerals, calcium and phosphorus, to combine chemically as calcium phosphate in the system. Approximately three-fourths of the mineral content of the human body is calcium phosphate.

CALCIUM INTAKE OF PRIMITIVE AND MODERN MAN

Primitive man was created to lead an active outdoor life. It is estimated that he consumed daily two grams of calcium from his 5,000 calories of food. The average adult today consumes approximately only 2,400 calories, or less than half that of his primitive ancestor. Aside from milk, our highly refined diets today furnish a daily average of only 0.17 gram of calcium, or one-sixth the amount required.³ This is an especially serious defect during growth, pregnancy, and lactation. With this great reduction in our calcium intake, our need of vitamin D is correspondingly increased in order that all the calcium ingested may be fully assimilated.

CLIMATE AND MODE OF LIVING AS CAUSATIVE FACTORS

The climatic conditions of the temperate zones and our highly civilized manner of life also favor the development of rickets. The full effect of ultra-violet rays cannot be obtained through the thinnest of clothing or even ordinary glass. Neither can these rays pass through the pall of haze, mist, fog, smoke, or dust which hangs so constantly over large areas of city and countryside.⁴ These factors decrease the natural activation of ergosterol into vitamin D.

All of the other vitamins are found in adequate amounts in the average diet; but vitamin D is limited. Our common foods, with the exception of egg yolk, and to a variable and slight degree, butter, cream and milk, contain practically none of it. Vegetables, fruits, meats, and cereals are all lacking in this factor. Cod-liver oil, of course, is rich in vitamin D. The use of this and other

medicinal antirachitics have reduced the frequency of severe types of rickets, such as are readily recognizable by the laity. But how frequently does mild rickets occur? We are asked to prescribe antirachitics without first determining the need through local surveys. Hess⁵ believed that no other disease of childhood is so commonly overlooked.

ANALYSIS OF ONE THOUSAND CONSECUTIVE CASES

With this idea in mind the determination of the prevalence of rickets in our own locality was thought to be of interest. For this purpose the records of one thousand consecutive cases, examined in recent years, were reviewed to ascertain the frequency of clinical signs of rickets. Since these children were brought to the office for various reasons, the examination of the bony structure in many of them was only incidental. It is quite probable, therefore, that the frequency of the various signs is understated rather than overstated. That the parents were health conscious is indicated by the fact that approximately 40 per cent of the examinations were "health examinations" in well children. The majority in this series had been given from birth such antirachitics as were available at the time. These measures must have reduced the number and severity of rachitic manifestations in this group below that of the child population of the city at large.

GROUP CLASSIFICATION BY AGE

For purposes of comparison the cases were divided into four groups according to age. The first group contains 226 infants, six months of age or under; the second group, including children from six months to two years of age, numbers 403; the preschool group (two to six years), 329; and the school-age group (six to sixteen), 248. Some of the children are included in more than one group because they were followed for several years; hence the sum of the groups is greater than the total number of children studied.

OSSEOUS SIGNS OF RICKETS

Some controversy has existed as to what osseous signs are necessary for a diagnosis of rickets. All of the signs included in this study, with the exception of the newer one, costomalacia,¹ are considered rachitic by such authors as Hess,⁵ Holt,⁶ Abt,⁷ Griffith and Mitchell,⁸ and others. These signs include for the head: bossing craniotabes, large anterior fontanelles (over three cubic centimeters), palpable mastoid or sagittal fontanelles and certain abnormal head shapes—flat or quadratic; for the chest such deformities as: Harrison's groove, beading, anterior softening (costomalacia), and square, funnel, or pigeon breast; for the extremities: enlarged epiphyses, genu valgum, genu varum, and pronated flatfoot.

The occurrence of the abnormalities noted in the skull were found to reach their highest percentage during the first months of life (Fig. 1). Craniotabes is especially evident during the first six months and reached a very high incidence in comparison with other reports. This is of especial significance because it is one of the earliest

* From Nutritional Research Laboratory, University of Oregon Medical School.

Read before the Pediatric Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935, and Washington State Medical Association at Everett, August 14, 1935.

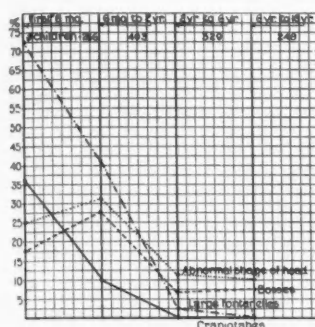


Fig. 1

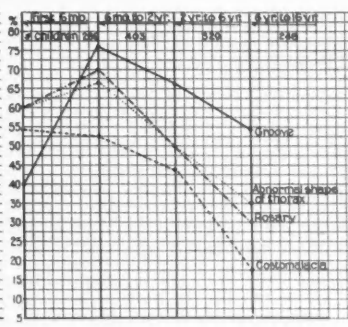


Fig. 2

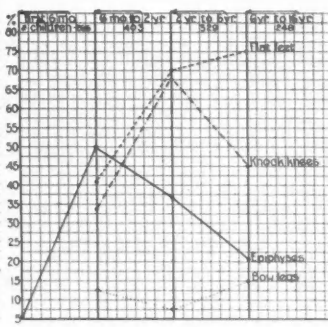


Fig. 3

Fig. 1.—Head signs of rickets by age groups.

Fig. 2.—Percentage frequency of thoracic signs of osseous malnutrition by age groups.

Fig. 3.—Percentage frequency of signs of osseous malnutrition in legs and feet, by age groups.

signs of active rickets. Chest signs, such as abnormal shape, costomalacia, enlarged costochondral junctions and Harrison's groove, are all very frequent in each of the age groups, but reach the highest point between six months and two years (Fig. 2).

After weight is put upon the feet, the changes in the lower extremities, such as bow-legs, knock-knees, and flatfeet, become common, especially the latter two (Fig. 3). These signs reach their highest point during the preschool age and continue at almost that level throughout the period of observation. Griffith and Mitchell⁸ also have found flatfoot a common rachitic deformity. Enlargement of the epiphyses is an earlier change, reaching its high point, 50 per cent, during infancy.

PREFERENTIAL SITES OF DEFORMITIES

Our observations are that the most rapidly growing portion of the skeleton at each age shows the greatest abnormality for that period (Fig. 4). Thus the head, which attains its permanent shape shortly thereafter, shows the most frequent signs of rickets during early infancy. Throughout the first year the chest is making its most rapid growth and, therefore, shows at this time its highest percentage of deformities. These stigmata may per-

sist, however, into the older groups. Changes in the extremities become more marked with time and, according to our records, outnumber all the other signs in children of school age.

This study reveals clinical evidence of osseous malnutrition in 97.6 per cent. In only twenty-four children, or 2.4 per cent of the one thousand histories reviewed, is there no record of bony changes attributable to rickets. An analysis of the signs recorded demonstrates (Fig. 5) that the chest findings, groove, beading and costomalacia are the most frequent. It was found that 91.6 per cent of these children had at least two signs of rickets, and that 75.8 per cent had three or more signs.

CONTRAST WITH OTHER LOCALITIES

Other localities have reported percentages practically as high as these we have found in our Portland records. Incidence studies of rickets made on certain groups of children in Hamburg revealed this dyscrasia in 95 per cent; in Riga, 86 per cent; in Boston, 79 per cent; while in Dresden, autopsies on a group of children two months to four years of age demonstrated rickets in 89 per cent.⁸

In a report on the comparative incidence of rachitic signs in children under three years of

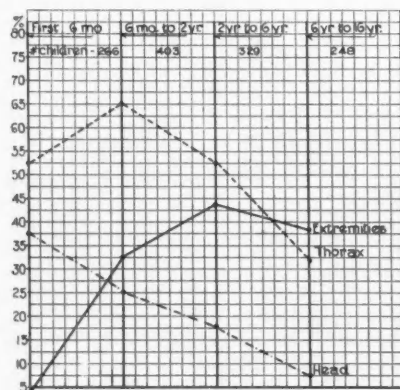


Fig. 4

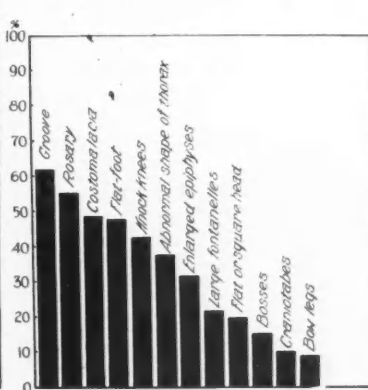


Fig. 5

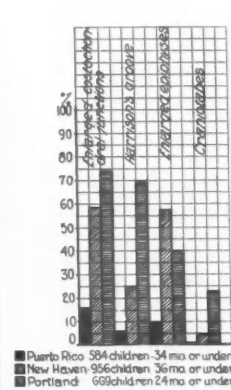


Fig. 6

Fig. 4.—Graph indicating the location of signs of osseous malnutrition in various age groups.

Fig. 5.—Frequency of certain clinical signs of osseous malnutrition in 1,000 children.

Fig. 6.—Comparative frequency of four signs of rickets in widely separated places.

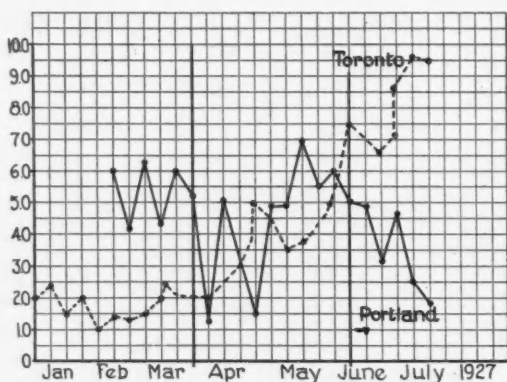


Fig. 7.—Weekly average of ultraviolet light units in the sunshine of Portland, Oregon, and Toronto, Canada (Manville).

age in Porto Rico and New Haven, Eliot⁹ found rosary, groove, and enlarged epiphyses quite characteristic of rickets. Her percentages for these signs and craniotables are compared with ours in Figure 6. It is noteworthy that Portland ranks higher than the other two cities, except as to the epiphyses. Probably we did not examine the wrists with as much care as did Doctor Eliot. Hess^{5, p. 214} states that microscopic examinations of the costochondral junctions usually show signs of rickets and that the common clinical error lay in not considering the beading as large enough to warrant a diagnosis of rickets.

A factor responsible for the amount of rachitic stigmata found in the Portland children is probably meteorologic. Although our climate is mild and equable, there is only a 50 per cent annual average of sunshine. Not only do we have less sunshine than in most other parts of the United States, but its quality is vitiated in the summertime by haze and by smoke from forest fires.¹⁰ Manville has demonstrated that during July, when the ultra-violet radiation should be most intense, it is actually considerably less than in midwinter (Fig. 7). Frawley¹¹ shows that in Fresno, California, "the garden of the sun," the haze which hangs over the valley during the summertime interferes with the transmission of ultra-violet light to such an extent that milk rickets is common even there. Lack of appreciation of these facts causes many parents to omit antirachitic measures in the summertime.

INFLUENCE OF ULTRA-VIOLET LIGHT

The development of a normal skeleton depends not so much on the amount of available ultra-violet light, but rather on the amount that actually reaches the nude skin. This fact is responsible for the presence of rickets, to an extent often not appreciated in even the most favorable climates. Holt well says, "Rickets is perhaps the most common disease of childhood." In sunny Utah, with its clear atmosphere, the marked case of rickets shown in Figure 8 developed. The farm that produced this prize rooster produced also this human specimen of classical rickets, with its square head, large epiphyses, bowed legs, and

flatfeet. Abundance of sunshine may give a false sense of security.

Although, according to present theories, the climate of the Pacific Northwest should produce them, we have never seen in Oregon a severe case of rickets, possibly because the need of antirachitics is generally known and applied. However, the common garden variety of mild rickets is evident in most properly taken nude photographs of children (Fig. 9). The correction of these milder deformities early is essential to the development of stronger, sturdier adults. For example, the elimination of flatfoot would increase the economic value of many individuals. A heavy responsibility, therefore, rests upon every physician who examines children.

GREATER HEIGHT FOUND IN WEST COAST NATIVES

Rate of growth is another important factor in the development of rickets. Mankind is growing taller in each succeeding generation, the average gain being three inches in the past four decades. Our army and navy records show that the West Coast produces our country's tallest men. In consequence, the medical profession here is confronted with the problem of strengthening the osseous system in proportion to this increased growth. A sturdy-looking, well-built youth, included in our series of cases, who has now attained a height of six feet two inches, recently fell in his own front yard while whirling on his toe and suffered seven fractures of the tibia. At an earlier age this boy exhibited eight of the



Fig. 8.—Example of severe rickets in a sunny climate with quadratic head, enlarged epiphyses, genu varum, and flat-foot (courtesy E. H. Christopherson, M. D., San Diego).

twelve signs of rickets listed in this study. Is it not probable that the same deficiencies, formerly manifested as rickets, are now appearing as osteoporosis?

PREVENTION

The various antirachitics so far in general use have not been sufficiently effective to prevent entirely osseous malnutrition, even though treatment was begun in the prenatal period. We formerly depended on cod-liver oil, but when three table-spoons daily failed to prevent rickets, we added artificial ultra-violet light, with slightly better results. Later viosterol was also given. That some improvement, however, has resulted from these antirachitic measures is evidenced by the fact that only nine of the 114 cases of craniotabes in this study were seen in the last two years. Doubtless, we can expect further advance toward our goal of perfect skeletal development through the application of additional antirachitic measures. The ideal antirachitic requires little or no maternal co-operation. The recently developed irradiated milk meets this requirement, and is the most reliable and natural preventive of rickets.

Since our living habits interfere with the proper irradiation of ergosterol in the skin, let us compensate for this lack by irradiating a common article of food. Of all of our foods, milk is the richest storehouse of calcium and phosphorus. It also contains some vitamin D, as well as the provitamin which can be changed to vitamin D on short exposure to ultra-violet rays. Thus, in one food are combined the three elements essential to normal bone formation—calcium, phosphorus, and vitamin D.

COMMENTS

A diagnosis of rickets is said by some to be impossible without roentgenograms, and quantitative determinations of the calcium and phosphorus of the blood serum. We recognize the advantage of these laboratory aids in ascertaining accurately the degree of disturbance in acute rickets, and in its differentiation from certain pathologic conditions and endocrine imbalances. We realize also the limited frequency with which such tests can be utilized in mild conditions.

For practical purposes clinical criteria must be adopted. Often, too, when one sees a child for the first time the acute rachitic process is past, but its residua are easily apparent. Photographs in front of a cross-lined screen are valuable for accurate diagnosis and for evidence of improvement. The retaking of such pictures every six months assists in obtaining both patient and parental co-operation in corrective measures.

We, therefore, believe it to be the part of wisdom to accept as signs of rickets those clinical manifestations which have proved acceptable during the past three centuries of scientific study of rickets. One is reminded of A. Graeme Mitchell's remark,¹² "One hardly needs a thermometer to tell him that water is hot when it burns his skin." Degrees of osseous malnutrition, rachitic in type, are palpable to the sensitive hand and visible to the practiced eye. When these defects are pointed out early, before reaching severe degrees, therapeutic



Fig. 9.—Mild rickets indicated by flat chest, bow-legs, and flat feet.

measures are more successful. With younger children a roentgenogram of the wrist assists greatly in determining the need for combining endocrine and antirachitic therapy.

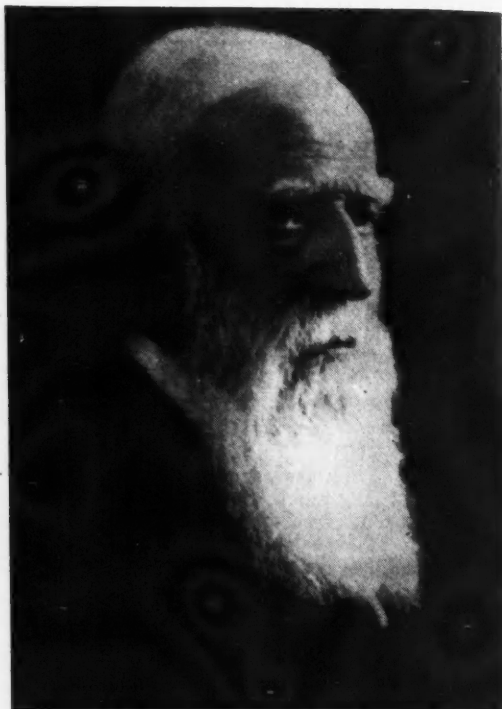
SUMMARY

1. Mild rickets is more common than is generally appreciated.
2. Lack of vitamin D is the most important factor in the etiology of rickets.
3. In man, Vitamin D is formed by the action of ultra-violet light on the lipoids of the skin.
4. Our habits of life prevent sufficient utilization of the available ultra-violet rays by the body.
5. The amount of ultra-violet light available depends on latitude, climate, and atmospheric conditions.
6. Portland, Oregon, has low average annual sunshine and atmospheric conditions which impair its usefulness.
7. At least 97.6 per cent of one thousand private patients examined had one or more clinical signs usually associated with rickets.
8. Of these, the chest signs, beading, groove, and costomalacia were most common.
9. The greatest number of clinical signs were found in the most rapidly growing parts: first the head, then the chest, and later the feet and legs.
10. Under our present dietary and living conditions, the antirachitics so far in general use have been unable to prevent a high percentage of mild rickets. Perhaps the universal use of vitamin D milk will accomplish this.
11. If an improved skeletal development is to be attained in the coming generation, the medical profession and the laity must be awake to the prevalence of bony imperfections and be alert to apply available preventives.

825 Medical-Dental Building.

REFERENCES

1. Moore, C. Ulysses: Newer Clinical Signs of Early Rickets, *J. A. M. A.*, 83:1469 (Nov.), 1924.
—Moore, C. Ulysses, and Dennis, H. G.: Cranio-tabes, *Amer. Jour. Dis. Child.*, 30:683 (Nov.), 1925.
—Moore, C. Ulysses: Rickets of the Lower Extremities, *Jour. Bone and Joint Surg.*, 10:96 (Jan.), 1928.
2. Bills, C. E.: Physiology of the Sterols, Including Vitamin D. Mead Johnson & Co., Evansville, Indiana. Reprint 1935, 15:1 (Jan.), 1935.
3. Rose, Mary Swartz: Foundations of Nutrition. Macmillan, 1927.
4. Hess, A. F.: The Ultra-Violet Rays of the Sun, *J. A. M. A.*, 84:1033 (April 24), 1925.
5. Hess, A. F.: Rickets, Osteomalacia and Tetany. Lea & Febiger, 1929.
6. Holt, L. Emmett: Diseases of Infancy and Childhood. Tenth edition. 1933. D. Appleton Company.
7. Abt, I. A.: Pediatrics. W. B. Saunders Company, 1923.
8. Griffith, J. P. C., and Mitchell, A. G.: Diseases of Infants and Children. Second edition. 1927. Vol. 1. W. B. Saunders Company.
9. Eliot, Martha M.: The Effect of Tropical Sunlight on the Development of Bones of Children in Puerto Rico. U. S. Department of Labor, Children's Bureau. Pub. No. 217. Washington, 1933.
10. Manville, I. A.: *Amer. Jour. Dis. Child.*, 37:927 (May), 1929.
11. Frawley, John M.: Ultra-Violet Light in California Sunlight, *Calif. and West. Med.*, 40:5 (May 1), 1934.
12. Mitchell, A. Graeme: Critical Interpretation of Clinical Observations: Chairman's Address, *J. A. M. A.*, 105:241 (July 27), 1935.



JOSEPH POMEROY WIDNEY, A. M., M. D., D. D., LL. D.
Founder of the Los Angeles County Medical Association
and of the College of Medicine of the University of
Southern California.*

THE LURE OF MEDICAL HISTORY†

JOSEPH POMEROY WIDNEY, A. M., M. D.,
D. D., LL. D.

FOUNDER OF THE LOS ANGELES COUNTY MEDICAL
ASSOCIATION AND OF THE COLLEGE OF MEDICINE
OF THE UNIVERSITY OF SOUTHERN CALIFORNIA,
CIVIC WORKER AND AUTHOR: SOME BIO-
GRAPHICAL NOTES ON A COLLEAGUE,
WHO, AT THE AGE OF 95, STILL
"CARRIES ON"*

By E. T. W.

PART I

IT is not given to every man, on attaining the ripe old age of four score and fifteen, as has been accorded Dr. Joseph Pomeroy Widney, the veteran physician and distinguished scholar of Los Angeles—who on December 26, 1935, celebrated his ninety-fifth birthday—to look back with modest complacency on a life so well spent and eminently fruitful.

THE DAYS OF YOUTH

Born, in 1841, among the forests of Miami County, Ohio, and in sight—as he himself expresses it—of clusters of Indian wigwams, the son

† A Twenty-five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

*The Council of the California Medical Association recently authorized the editor to arrange for the sketch presented, the result of a pleasant interview. See also page 251.

of Wilson and Arabella (Maclay) Widney, of sturdy Scotch and Huguenot ancestry, Joseph Widney inherited the very qualities needed to rise out of, and beyond his almost primeval environment. He pursued the required courses of the Piqua high school, and from there entered Miami University at Oxford, Ohio, where his encounter with the academic authorities foreshadowed a mind inclined to think and act for itself. He had read history, he told the president, and had already taught trigonometry, and all that he wanted was more Latin and Greek. He commenced college work as a sophomore, only to leave the classic halls at the end of five months, in voluntary response to a call to arms in defense of his war-torn country.

After shouldering musket and rifle in the field young Widney entered the hospital service on the steamers of the Ohio and the Mississippi. Then, with failing health in the late autumn of 1862, he came to California.

GRADUATION FROM TOLAND MEDICAL COLLEGE
IN 1866

Arriving at San Francisco, he continued the literary courses begun at Miami, in studies pursued at the University of the Pacific, where he was made a Master of Arts; and after that he matriculated in Toland Medical College, later ab-

* This is a photograph of Dr. Joseph P. Widney, taken in the year 1936, and shows his appearance at the age of ninety-five.

sorbed by the medical department of the University of California, from which institution in 1866 he received the M. D. degree. Looking backward to those postgraduate days, he recalls, as among his instructors, the surgeon, Dr. Levi Cooper Lane, who founded Cooper Medical College in honor of his uncle, Dr. Elias Samuel Cooper. He also remembers Dr. Henry Gibbons, professor of *Materia Medica*, of good old Quaker stock and marked manners as a gentleman; an earnest temperance lecturer, with a peculiar, dry humor, who, as president of both the San Francisco and the California State Medical societies, reached eminence. Another lecturer brought to mind was Dr. H. H. Toland, a South Carolinian, "a good, practical surgeon, a man of great capacity who made money and made it rapidly, and built, at his own expense, Toland College." A daughter of Doctor Toland married Andrew Glassell, a leading attorney of Los Angeles.

SERVICE IN THE UNITED STATES ARMY: SURGEON
IN DRUM BARRACKS, WILMINGTON, AND IN
THE ARIZONA-APACHE CAMPAIGN

Returning to military duty in the United States Army, when General David McMurtree Gregg, commanding the Department of the Pacific, came down the Coast from San Francisco with recruits on the old side-wheeler, the steamer *Orizaba*, Doctor Widney, after a month at Drum Barracks, at Wilmington, started for Arizona in charge of some hundreds of recruits and saw two years of arduous service in Arizona in the campaigns of 1867 and 1868 against the Apaches. The unadorned narratives of his adventures during the rough formative periods of that corner of the Southwest might well afford fireside entertainment.

"Leaving Drum Barracks and San Pedro," he says, "we started out for Arizona through San Geronio Pass—I on horse, but most of the recruits on foot. From there we crossed the Colorado Desert, and went into camp somewhere below Palm Springs. By the eighth of March we were crossing the desert, and such was the sudden change that two men dropped in their tracks, overcome by the heat. Then we started to climb Granite Wash, some sixteen miles of upgrade, and when we were about half way, a thunder storm broke in the mountains. Lieutenant McConnihe brought the troops to a halt, and gave orders to pitch camp. I immediately objected to the site, considering it unsafe; but the lieutenant replied that, as the wagonmaster had made the selection, the decision would stand. A short time, however, after the men had unhitched the wagons, we heard a roaring in the mountains, and I at once knew what it portended; and in a moment, seeing the waters rushing down, with a ten-foot head, I shouted to the men to jump for the rocks as quickly as they could and save their lives. The water actually seemed to leap from rock to rock, bounding and rebounding eight to ten feet high before hitting the earth again. About half of our wagon-train was swept away, a severe loss since



JOSEPH P. WIDNEY, M.D.
Reproduction of a photograph taken between
1870 and 1880.

many of the wagons were loaded with barley, which, scattered by the flood, caused a sixteen-mile field of barley to spring up. Moving on to the territory due north, I helped to reestablish Date Creek Post. I was next, for some months, on duty scouting over the northern part of the territory.

"I then received orders to take charge as surgeon at Apache Pass in the southern part of the territory. In company with a small band of officers likewise ordered to the south, and with an escort of soldiers for greater safety in the Indian country, we crossed fifty miles of desert without water, traveling all night because of the heat. Passing on through Tucson, I went to my own post at Apache Pass, over a hundred miles east of that town. At that place I remained on duty for a year, and built the Post hospital; and that year was also spent, for the most part, on scouting duty. Lieutenant Carroll, commander of the Post, was killed by the Indians in one of their raids. I carried his dead body back to the Post strapped across my saddle. A civilian, killed with him, was buried by his side. In our last scouting trip, we were without water for twenty-four hours, traveling through the grass fires which the Indians had set to hide their trail. The heat was intense and the men were becoming exhausted. Dismounting, I put them, by turns, on my horse, riding, while I myself went along half the day on foot, carrying a heavy rifle, and having an army revolver and a cartridge box buckled around me. The only thing that saved our whole command from perishing was the accidental discovery

of water, of which the guide had not known, at a small stream in the mountains.

"On this scouting trip we buried the dead bodies of two men killed by the Indians several days before. They had been put to death by torture, walking in a circle until they had worn a pathway. I had the men, by details, look at the dead bodies, telling them, 'That is what you may expect if ever you surrender; so fight to the last, and make them kill you.' The men dug a shallow grave with their bayonets, rolled the putrid bodies in, and covering them with stones to keep away the coyotes, we then left them to their last sleep away up in the Chiricahua Mountains, where they gave their lives to make safe the peaceful homes which now lie in the valleys below."

ENTRANCE INTO PRIVATE MEDICAL PRACTICE IN LOS ANGELES IN 1868

In 1868, after reporting at headquarters in San Francisco, Doctor Widney left the army and settled for private practice in Los Angeles, where he has since remained, a decidedly influential force in both the development and the upbuilding of the community. He opened his first office in the old Temple Block, now torn down. At that time his professional associates included the esteemed Dr. John Strother Griffin, brother-in-law of General Albert Sidney Johnston, a surgeon in the old army of Mexican War times, and once half-owner of the site of Pasadena; Dr. Richard Den, a true Irish gentleman of dignified mien and striking personal appearance, especially when on horseback; Dr. William Francis Edgar, also a surgeon of the old army before and during the Civil War, who had seen much service against the Indians and became, in his will, a benefactor of the Historical Society of Southern California; and Dr. Pigne Dupuytran, who was in charge of the French Hospital. Doctor Widney enjoyed his share of a growing local patronage, the citizens of Los Angeles learning, little by little, that it was not always necessary, as in earlier days, to go north for expert medical care. Even when Los Angeles had some 5,000 souls, San Francisco boasted of more specialists, such men as Doctors Cooper, H. H. Toland and John James Sawyer having an especially enviable reputation. Occasionally, a distinguished traveler came the doctor's way; as, General William Tecumseh Sherman, who once passed through en route to the East, a little worried as to the state of his lungs, and who, Union veteran though he was, soon sent for Doctor Griffin, of Confederate sympathies. The latter called in Doctor Widney for consultation; but the two M. D.'s decided that General Sherman had no cause for alarm. Less distinguished visitors than the hero of "The march through Georgia" also came to Los Angeles; as Tubercio Vasquez, the notorious bandido, who proved one of the most suave and courteous of prisoners, bowing and throwing kisses to the ladies, in turn storming the jail doors, and bringing him flowers. His demeanor, indeed, was such that "Billy" Rowland, then sheriff, was inclined to afford him some



JOSEPH P. WIDNEY, M.D.
A photograph taken between 1880 and 1890.

leniency, particularly as Vasquez was wounded; but Doctor Widney, when called in to see the prisoner, said: "Billy, this man is perfectly able to jump on a horse and ride fifty miles without stopping, and I think that, instead of giving him any privileges, he should be chained, and fast, to the bedposts." Rowland followed the doctor's common sense suggestion, and added weights to the handcuffs, which may explain, in part, why at last this bandit, long the terror of the country, was actually executed.

FOUNDING OF THE LOS ANGELES COUNTY MEDICAL ASSOCIATION, ON JANUARY 31, 1871*

Three years or less after he had established himself in private practice, Doctor Widney issued a call for the founding of the Los Angeles Medi-

* Editor's Note.—The exact date of founding of the Los Angeles County Medical Association is January 31, 1871; no authentic record of any medical society existing previously in Los Angeles having been found. Years ago—that is, in 1911—while compiling a "History of the Medical Profession of Southern California," our attention was called, by an officer of the Pioneer Society of Los Angeles, to a fee table of 1850, found in the Court House by Sheriff William R. Rowland (the same genial, doughty "Billy" mentioned by Doctor Widney in his reminiscences of the bandit Vasquez), and this list of fees was printed on page 8 of the book. Between the year of the fee table, however, and that of the Society's founding, is too long a period to permit even poetic imagination to affirm that 1850, the time of agreement by the four pioneer Los Angeles physicians—A. U. Blackburn, Charles R. Cullen, J. W. Dodge, and W. B. Osbourn—constituted the founding date of the Los Angeles County Medical Association!

The oldest medical society of the State, according to California Medical Association records, is the San Francisco Medical Society, which was organized on January 1, 1868, and the second oldest society is the Sacramento Society for Medical Improvement, established on March 17, 1868, some three months after the San Francisco association was formed. The Los Angeles County Medical Association followed on January 25, 1871. Early in 1871 the Alameda County Medical Society was organized; four years later, in May, came the San Joaquin County Medical

cal Association, having satisfied himself of the need of just such an organization, and that, just then, there was nothing similar in the southern part of the State. He brought together, on January 31, 1871, some seven physicians who soon adopted a constitution and by-laws, and chose for their president, Dr. John S. Griffin, patriarch of the Los Angeles medical profession.[†] At the next meeting, on February 7, Doctor Widney was notably active—reporting an amendment to the constitution concerning the status of honorary members, and helping to formulate a bill, adopted March 7, fixing fees to be authorized. In 1877, the subject of our sketch was elected president of the Society, and for six terms he acted as one of the censors, the successive minutes—as of other organizations with which he became identified—showing his eager and untiring participation in all the constructive work that had to be done.

SERVICE AS A PUBLIC HEALTH OFFICER

As early as February 1, 1876, Doctor Widney called the attention of the Society to the unsanitary condition of the city, and the need of a board of health and health officer, the minutes recording, "Upon motion of J. P. Widney, a committee of three was appointed to draw up a communication to the City Council urging the importance of establishing a Board of Health, and the appointment of a Health Officer; when the President appointed as said committee J. P. Widney, H. S. Orme and J. H. McKee." Somewhat naturally, Doctor Widney in time served on the Los Angeles Board of Health, when Dr. J. B. Winston was health officer, the latter having succeeded Dr. Walter Lindley. Doctor Widney was also for several years a member of the California State Board of Health.

Society, and on September 5 of the following year the Santa Clara County Medical Society began its existence.

The Medical Society of the State of California, first organized in 1856, recessed in 1862, and was reorganized in 1870. In this connection, as an interesting item shedding light upon the distribution of population and the state of organized medicine in California, is the fact that the first physician residing south of the Tehachapi ever to be elected president of the Medical Society of the State of California was the late Henry S. Orme of Los Angeles, who was installed in 1879; he was followed in 1890 by the late Dr. Walter Lindley of Los Angeles. Six years later the late Dr. William LeMoine Wills of Los Angeles headed the Society, to be succeeded in 1898 by the late Dr. Cephus L. Bard of Ventura. In 1905 the late Frank I. Adams of Oakland was president; while the only other presidential colleague from Alameda County prior to Doctor Adam's election was the late Dr. W. P. Gibbons in 1886.

[†] An excerpt from page 32 of "The Medical Profession in Southern California," printed in 1910, gives further information concerning the founding of the Los Angeles County Medical Association:

"A brief sketch, written by the secretary of the Society in 1891, Dr. H. Bert Ellis, presents a summary which can be used as an introduction to the detailed historical sketch of the Los Angeles County Medical Association."

"The Los Angeles County Medical Association was organized January 31, 1891.

"A preliminary meeting had been held at the office of Dr. H. S. Orme on January 25, at which six physicians were present, and at which time Doctors Orme and Hayes were appointed a committee to draft a constitution and by-laws.

"On January 31, at the office of Doctors Griffin and Widney, this committee reported. Seven physicians were present and organized themselves, adopted a constitution and by-laws, and adjourned to meet at the same place on February 7. The seven charter members who signed the constitution on the evening of February 7, 1891, were: John S. Griffin, Henry S. Orme, Joseph P. Widney, William F. Edgar, R. T. Hayes, L. L. Door, and T. H. Rose."

STUDIES ON CLIMATOLOGY OF SOUTHERN CALIFORNIA

These studies of sanitation and similar subjects bearing on public health turned the Doctor's attention to climatology, and he gives us an interesting paragraph or two about the results:

"When I was stationed as post surgeon at Apache Pass, Arizona, in 1867-68, I made monthly reports to the War Department upon the climate of that section. Indeed, in nearly a year of active campaign duty which covered almost the entire territory, I reported all the facts that could be noted without the use of instruments. These reports included data as to sunshine or occasional clouds, variations of temperature, wind and rain storms, mountain floods and water supply. On my return to California and Los Angeles, I resumed my studies of weather and climate, and their effect upon health. I kept in close touch with both the United States Signal Service, after its establishment here, and private observers who often were among the most enthusiastic. And I published in the city press and magazines many articles, and issued numerous pamphlets, seeking to direct the attention of the public to more thought upon these subjects, to me, more than ever, matters of importance. I gave expression, too, to many theories and convictions in the introductory chapters of 'California of the South,' a volume first published in 1888, and reissued in 1896 when, with Dr. Walter Lindley, I discussed the physical geography, the climate, mineral springs and health resorts of Southern California, and helped with him to provide one of the earliest guidebooks to this region."

ADVOCACY OF FLOODING OF THE COLORADO DESERT

Growing out, also, of these general studies of climatology, were efforts made by Doctor Widney for the flooding of the Colorado Desert—first suggested by him in an article published in the *Overland Monthly* in 1873—and the setting aside of great forest areas for the benefit, in a conservation of resources, of generations to come. The flooding of the desert, according to Doctor Widney, is now going on through seepage from irrigation in the Imperial Valley; hence, the Salton Sea, which is steadily increasing in size, year by year, is already having a material influence upon the climate of the Lower Colorado Basin. In first proposing to set aside the three forest reservations, Doctor Widney gave impetus to the great work of securing the present water supply for Los Angeles. Laying his arguments before the proper authorities, he suggested making one reservation of the forests north of Los Angeles and toward Santa Barbara, another in the mountains eastward about San Bernardino, and a third in the mountain region about San Diego; and this personal effort on behalf of posterity was handsomely acknowledged when the Government declared reserved the very areas in the Widney recommendation.

(To be concluded)

TWENTY YEARS OF SANITARY ENGINEERING IN CALIFORNIA

By C. G. GILLESPIE*
San Francisco

IN 1915 the California Legislature, harassed by sanitary problems and pursuing the precedent of a few other states, provided a Bureau of Sanitary Engineering in the State Board of Public Health. It has since been maintained with appropriations varying from \$15,000 to \$25,000 per year. The Public Health Act of 1907, providing for a permit system and state approval of plans and sites, has been rigorously applied to sewage disposal projects, and, as far as time has permitted, the companion Sanitary Water Systems Act has been applied to water supply. Largely as a result and also influenced by the general improvement in sanitary engineering knowledge throughout the country, and the promotion of better sanitation by health officers, water supplies and sewage disposal are far from the plague they once were, as this review will indicate. It is the story of the quiet work of many people throughout the State, with the bureau as its center.

The highlights of accomplishment where contrasts of past and present are striking may be recounted as follows. Prior to 1915 so few sewage treatment plants had the benefit of wise selection of sites and methods of treatment that out of some eighty-two works built in California up to that time, forty-five, or over half, have since been abandoned. Out of 181 sewage treatment plants built under state supervision since 1915, only ten plants have had to be replaced by others. The longer life of usefulness of so many plants must have been worth huge sums to the cities and towns of the State. So, too, has been the almost total absence of litigation over unsanitary sewage disposal and water supply; and also the movement which the State is in peculiar position to foster, whereby communities have joined in the common disposal of their sewage. Nine treatment plants now solve the problem of disposal for forty-three communities and spare a large countryside the annoyance of neighboring sewage works.

Through attacks by many agencies, on many fronts, the greatest of which is water disinfection and better laboratory control, typhoid fever epidemics, as derived from water, have almost disappeared, the last water-borne outbreak in California having occurred in 1924. Prior to that time, scarcely a year failed to produce one or more water-borne typhoid outbreaks. Sewage treatment prior to 1915 was limited almost entirely to septic tanks. The designs of the bureau for a trickling filter at Reedley in 1915, and for an activated sludge plant at Folsom Prison in 1917, inaugurated the two most common of the high grade or "complete" processes of sewage treatment to be seen in the State today. Nearly half of the present-day sewage treatment works represent "complete" processes in which not only is the sludge removed from the sewage, but the sewage is rendered clear and odorless. Recently a few plants have also disinfected the effluent and several have been induced to employ better odor control in the plants. Odorless sewage disposal, now gaining recognition throughout the country, has always been emphasized since the Bureau was created.

One hundred forty-three places have put in new sewer systems since 1915 and the State is in a fair way to attain, generally, the convenience of sewerage and plumbing—probably within another twenty years.

By reason of the endemic and epidemic typhoid fever which kept the State alarmed, the first major task in 1915 was to raise the safety of water supplies. The Bureau at once established state-wide bacterial control of water systems and largely as an outcome of this many dangerous supplies were abandoned, others protected, and almost 150 places have provided some form of water treatment, the most common of which is water disinfection. The only water purification prior to 1915 was a sort of straining practiced at three or four places and some attempt at water disinfection. There are now thirty-six filtration plants, about half of which will compare with any in the

country. More recently, municipal water softening has appeared. All these waterworks have a frequent bacterial control through the water department or the health department. It may be hard to realize that in 1915 few waterworks men were willing to have their water tested.

Cross-connections between private and foreign sources of water are generally considered to represent the last remaining common menace to the purity of water supplies. Not less than one thousand of such connections have been done away with in this State within recent years, under plans prepared or approved by the Bureau.

Each year approximately one hundred water supplies are reported on for certification to the United States Public Health Service, which in turn certifies them by reason of their use on some three hundred common carriers.

There are approximately eight hundred waterworks and sewer systems in California. These have been inspected at irregular intervals and in 1930 to 1932 all municipal systems, aggregating about seven hundred, were surveyed systematically and fully reported by the Bureau. Standards of sewage disposal in state institutions have been brought to a high plane through the concerted planning by the Bureau of the State Department of Engineering, which actually builds the works.

State swimming-pool sanitation was pioneered in California in 1917. The number of pools is now close to three thousand. Almost all the states have followed closely in the path this State has set.

With the City Health Department of San Francisco, sanitation of oyster beds, clam beds, and shellfish shucking plants was inaugurated here a few years ago. State-wide regulations were devised and we believe the program accounts in large part for the recent reduction of typhoid fever to the vanishing point in San Francisco, the shellfish center of the State.

Mosquito and malaria control have been organized on a wide scale, particularly in the Sacramento and San Joaquin valleys. The malarial fevers and mosquito pests of not many years ago are probably still fresh in many minds.

Rural sanitation has been aided by the distribution of thousands of copies of bulletins giving instructions on rural sewage disposal and water supply, and country homes now generally enjoy piped water and city plumbing. Cropping of sewer farms has been under State regulation since 1917.

Standards of sanitation in the mountain playgrounds have been established on an exceptionally high plane in cooperation with the National Forest Service. The squalid camp grounds and roadsides of fifteen or twenty years ago are seldom seen nowadays. Through the early work of the Bureau and the sanitary inspectors, the purity of Lake Tahoe was saved for recreation and water supply. One of the first tasks in 1915 was to undo the running of sewers into the lake, then a common sight at nearly every resort.

In twenty years it is easy to forget the innumerable and notorious instances of stream pollution that plagued the State a generation ago. For example, there was Merced River which was receiving sewage in the heart of Yosemite. Auburn Ravine, below Auburn, was substantially a sewer. Yuba River, opposite the Marysville sewer farm, kept two cities in a turmoil. The blue water of the Feather River, at Oroville, could not be used on account of the taint of sewage. Tuolumne River, below Modesto, was a source of endless complaint. The Sacramento River, at Dunsmuir, was notorious for the piles of sewage along its edge. Kings River, at Reedley, aroused Kings County into an expensive litigation against the city. Sonoma Creek, below Sonoma State Home, was a source of stench through a famous vacation belt. Truckee River, at Truckee and Floriston, was useless even for fishing. Santa Rosa was suffering under a 27-year-old suit by reason of pollution in Santa Rosa Creek. Napa River, from Calistoga to its mouth, polluted near-by wells, caused offensive odors, and prevented picnicking on its banks. Several of the famous beaches of the State were under quarantine at one time or another. For example, the beaches at Santa Cruz, Capitola, Santa Barbara, Monterey, and the wonderful beaches off Santa Monica, Venice,

*Chief, Bureau of Sanitary Engineering, California State Board of Public Health.

Hermosa and Redondo and Long Beach. Recently, a noteworthy dent has also been made in reducing the sewage pollution of San Francisco Harbor through the construction of several sewage treatment works.

There were also many notorious sewer farms and sewage treatment works that no longer occupy the picture. For example, the sewer farm at Pasadena, once the occasion of a complaint by six thousand people; numerous sewer farms in Orange County, which were replaced by a joint outfall to the ocean; sewage works right in the towns of Gilroy, East San Jose, College Park, Santa Clara, San Luis Obispo, Yreka, and Beverly Hills. There were scores of others of which space does not permit mention.

It is hard to believe that in 1915 cities like Antioch and Pittsburg used river water practically without treatment and at the same time ran their sewage back into the same stream. Imperial Valley and the Mother Lode towns had no treatment of their ditch water other than passage through small weed-grown settling basins. The water supplies of the East Bay cities was a source of daily complaint. The same was true of the water supplies at Los Banos, Eureka, and Beverly Hills. Now excellent filtration works, or in some cases simpler devices, have disposed of the problems of all these places, troublesome alike to customer and management.

The work of state sanitation has followed many other trails, more or less related and contributory to those illustrated. For example, there has been much work on the water supplies of the State with reference to iodine and goiter; fluorine and mottled enamel of teeth; behavior of cyanides in water supplies; field and laboratory studies of the various industrial wastes common to this State, particularly canneries, milk plants and beet-sugar factories; pollution studies of streams; hundreds of performance tests of waterworks and sewage treatment works as a means of perfecting and maintaining good operating conditions; mapping nuisances around numerous sewage disposal areas; silicosis hazards in industry, and like tasks. Standards of sanitation for bottled water plants were once devised. Though never adopted, they have been widely distributed and had noteworthy educational influence. An important, in fact indispensable arm of the Bureau, has been a sanitary engineering laboratory in which tens of thousands of water samples have been examined and in which test methods have been perfected for the examination of water, sewage, and trade wastes. Research into the character of these substances and methods has also featured the laboratory work.

One scarcely realizes the massive improvement in the sanitary engineering environment of the State until viewed in retrospect over such a term of years. In spite of the progress, however, scores of troublesome problems, particularly the expensive and difficult ones, still remain.

CLINICAL NOTES AND CASE REPORTS

LUNG FAILURE

By JOHN W. SHUMAN, M.D.
Los Angeles

LUNG failure may be minute or severe. It happens at birth—collapsed or atelectatic lungs; and it takes place in senility—wet or hypostatic pneumonia.

There are many degrees of many maladies, affecting many lungs differently.

1. Anatomically (malformation);
2. Physiologically (acidosis);
3. Pathologically (inflammation); and
4. Combining forms of these three.

The inadequate bellows of a congenital pulmonary insufficiency, either on account of defective central or peripheral innervation, circulatory,

muscular, or bony development or injury, needs recognition, study, and sane management. Often we see "the Mark Twain type of steamboat" lung—the one that had an engine with a four-foot boiler and a twelve-foot whistle, and every time the whistle was blown the engine stopped!

Physiological lung failure is exemplified in the habitual inadequate breather, the acidotic, the asthmatic, and the endocrine-imbalanced individual, and are not uncommon. These are for the most part compensatory affairs.

The pathological causes for lung failure are legion, only the grossest getting attention, often too late. Such chief complaints as cough, expectoration, hoarseness, pain, or shortness of breath call for:

1. Inspection, in a good light for asymmetry, defects, lagging and abnormal pulsations.
2. Palpation, to confirm or dispute No. 1, for muscle spasm, tenderness, and thyroïdal, lymph and breast lumps.
3. Percussion, to "sound" the intrathoracic organs and liver. But let us not fool ourselves: after listening (auscultation), take a look with the fluoroscope.
4. Auscultation, with the unaided ear (because we always have it with us). Know normal heart and lung sounds, then it is not difficult to hear the abnormal.

After these four steps:

5. Contemplate and make provisional diagnosis or diagnoses. Then try to disprove ourselves, instead of "crooking" to bolster up our diagnosis. Use the hollow needle, if we suspect fluid; use clinical and x-ray laboratory assistance for sputum, blood and tissue study; also the bronchoscope. And if a demise, a thorough-going autopsy.

REPORT OF CASES

One is one; two, a couple; three, the fewest of a few—here are three:

CASE 1.—A fairly common cause for lung failure. A 24-year-old mother of an eleven months' child was first examined December 31, 1934, whose pediatrician told her, four months ago, "to take cod-liver oil." It did not cure her. Yet an x-ray technician, not a physician, referred her last Monday, and I found her temperature 102 degrees at 2:30 p. m., pulse 115, cheeks flushed, playing of alae of nose, fast, shallow breathing, lagging of right chest, numerous râles which did not clear on coughing, cavitations on right, while the fluoroscope confirmed the diagnosis of "advanced, active consumption." I referred her back to the x-ray technician for a "chest plate" for record. Died November 23, 1935.

CASE 2.—A left-lung affair in a 26-year-old single woman who "had 'flu' in France," recovered, but "spit up" for a long time afterward. In March, 1934, she had a chest cold. A physician told her to go home and go to bed for ten days. He reexamined her and said to remain in bed. I saw her and recognized "left lung failure," due to chronic adhesive lower-lobe pathology—"residual lung abscess." September, a pneumonitis; my associates diagnosed tuberculosis. She recovered, and is well and at duty, is well nourished, and sputums are all "negative."

CASE 3.—I knew what was the matter with this 60-year-old cachectic man, an ex-soldier, when I saw him in consultation at the National Veterans' Hospital: "Malignancy of transverse colon with metastases to the right lung." But at autopsy the lung tumor was found to be a laminated aneurysm!

3780 Wilshire Boulevard.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

CARCINOMA OF THE PROSTATE

PATHOLOGY AND PROGNOSIS

A. J. SCHOLL, M. D. (523 West Sixth Street, Los Angeles).—Pathologically and clinically, there are two types of prostatic cancers, with, of course, intermediate stages. The first is the more common type, and its degree of malignancy is lower than that of the second type. The structure is made up of cells and glands, and retains the normal or glandular structure. The cells are partly differentiated, fairly regular in size and shape, and retain the long, tufted end projecting into the glandular lumen, which is the most significant feature of prostatic epithelium. The nuclei are round, relatively larger than the nuclei found in normal or hypertrophied glands, and contain the distinct nuclei which are so prominent in undifferentiated cells. Clinically, these prostates are large, nodular, stony, and produce the symptoms of obstruction first calling attention to their presence. The second type of cancer is often confused with lymphocytic infiltration. The malignant cells that have migrated into the stroma often show a streaked or etched-out appearance, in contrast to the clumped, localized disposition of lymphocytic infiltration. The cells in such glands, either from morphologic or mechanical influences, have lost their original structure; they do not conform to the usual type, but vary in size and arrangement. These may comprise great masses or extending wedges of tightly packed cells, containing large, deeply staining nuclei. In other cases, the cells may be loosely arranged, separated, and supported by a small amount of connective tissue. In prostatic carcinomas of Type 2, in which there is an excess of fibrous tissue, the cells may have disappeared completely, or may be pressed into bizarre lines and streaks; and often they are recognized only on account of the deeply staining nuclear fragments which persist. If there is glandular formation, the acini are atypical and the cells are flat, grouped together irregularly, and they contain nuclei which are, relatively, much larger than those found in non-malignant cells. Clinically, the prostates of this type are small, fibrous, and firmly fixed. They are extremely malignant, metastasize readily, and are often unrecognized, since paralysis may occur as a result of the metastasis before the glands have reached sufficient size to produce urinary symptoms. Their small size often leads to the erroneous opinion that the patients are good surgical risks, and to operations with unfavorable results. In 100 out of the 146 patients of a series reported by Judd, Bumpus and Scholl from the Mayo Clinic, it was possible to correlate the histologic findings with the post-operative course. Forty-four prostates were of

Type 1, and fifty-six were of Type 2. Eleven patients with prostatic cancers of Type 1 lived more than three years; twenty-two are still alive, one for the past six years, two for five years, four for four years, three for three years, six for two years, and six for one year. Sixteen of the patients with prostatic cancers of Type 2 lived two years, seven lived three years, and only one lived more than three years. Three patients are still alive, one surviving for three years and two for one year after operation. It seems evident, therefore, that in cases of cancer of the prostate, the degree of malignancy, as demonstrated microscopically at least partially, determines the prognosis, and that when the disease has advanced sufficiently to be recognized clinically, the possibility of surgical cure is diminished.

* * *

EARLY SYMPTOMS AND DIAGNOSIS

NATHAN G. HALE, M. D. (1127 Eleventh Street, Sacramento).—The specialist, in reviewing his referred cases of carcinoma of the prostate, will find that symptoms suspicious of malignancy have been present from one to three years. Therefore, every effort should be made to place in the hands of those who first see these cases all possible aids in early diagnosis.

In view of the fact that the symptoms of carcinoma and benign hypertrophy are sometimes confusingly similar, and that a good proportion of hypertrophies are associated with malignancy, an accurate estimate of the time the cancer first began to invade the prostate is uncertain.

The symptoms of cancer of the prostate are as obscure as are the symptoms of cancer in general. However, the so-called "cancer age" for the prostatic type is not of as great variation as that of cancer in general, and suspicion should be aroused when any patient complains of urinary disturbance between the ages of fifty and seventy, and more particularly between the ages of sixty and seventy.

Detail of Symptoms.—Frequency of urination is the most common symptom, that is, voiding more than once a night and more than four times during the day. When there is no associated hypertrophy of the prostate, and the bladder seems to be completely emptied, there is often noted irritation of the deep urethra and pain in the penis during urination. Slight difficulty associated with urgency in voiding deserves careful investigation.

Pain, usually the dull aching or rheumatic type referable to the sacroiliac region, penis, perineum, thighs or inguinal region, or suprapubically, is not uncommon, and is often an early symptom. One is not unaccustomed to seeing a case with

few urinary symptoms and few referred pains having an extensive metastasis.

Gradual diminution of strength and loss of weight, associated with the other threads of evidence pointing to a prostatic carcinoma, are important but unfortunately do not occur early. A stricture which develops during the carcinoma age and is treated with slight improvement, should be looked upon as a possible early carcinomatous prostate.

Prostatitis, treated without response in a patient of the cancer age with no venereal history, should be looked upon with suspicion.

Coitus is occasionally impaired to a greater extent than is indicated by age. Ejaculations are often painful.

In summarizing, early symptoms may be tabulated as follows:

Carcinoma without associated hypertrophy:

1. Frequency of urination.
2. Difficulty in urination.
3. Urgency.
4. Pain in penis during urination.

Carcinoma with benign hypertrophy:

1. Increased difficulty in urination.
2. Less urgency.
3. Occasional retention of urine.

Carcinoma with chronic prostatitis:

1. Frequency of urination.
2. Irritation of deep urethra.

Diagnosis.—Carcinoma of the prostate with metastases does occur with few, if any symptoms; but this is not the rule, and our problem is to make as early a diagnosis as possible. It is believed by the writer that the existence of carcinoma would be more often discovered earlier if some method could be devised to popularize the introduction of the gloved finger into the rectum. By such a method, intelligently used, more cases would be diagnosed early. Many of the x-ray findings of metastases would not be such a shock to the nervous systems of the group of busy practitioners, who depend largely upon mechanical diagnostic aids in their work. With metastasis already present, there is no hope. With early diagnosis, there is always hope and not infrequently a cure.

Digital Examination.—On rectal examination, the normal prostate is smooth and elastic. On slow, careful, firm pressure no areas or small nodules of induration will be noted. The median furrow will not be indurated. With a sound in the urethra, and the finger in the rectum the membranous urethra will not be thickened. The lateral borders will be free of irregularities. If there is any variation from the above, carcinoma must be suspected.

According to Marion, whenever, in a case of hypertrophy of the prostate, the rectal touch reveals large bosselated and painful seminal vesicles that do not empty on stripping, one is justified in suspecting a possible malignant degeneration of the prostatic lesion.

The posterior or rectal surface of the prostate fortunately is that portion usually first involved

in carcinoma. During the cancer age, when more than usual pain, associated with a noticeable constriction of the posterior urethra, is caused by the passing of a sound, malignancy should be suspected. Therefore, most valuable early information is obtained by digital examination.

To the brief résumé of the above cardinal findings in early diagnosis may be added a maze of other palpable aids, as the disease progresses. No better term could be used for the outstanding characteristic than "stony hardness." This may involve the entire prostatic area, extend into the region of the seminal vesicles, and occasionally break through the posterior fascia. Pelvic glands may be palpated. In fact, a museum of carcinoma does occasionally present itself.

Summary.—Therefore, one may conclude that symptoms are valuable as a diagnostic aid, but not conclusive, and that digital examination with the finger in strategic position is feasible, tangible and valuable, and of infinitely great and far-reaching value to the profession and the public.

* * *

TREATMENT

LIONEL P. PLAYER, M. D. (384 Post Street, San Francisco).—An analysis of the literature devoted to carcinoma of the urinary tract shows that of the total number of such cases, 57 per cent occur in the prostate gland. Twenty-five per cent of all men past the age of fifty have prostatism, and of these, one-fifth have carcinoma of the prostate. The Bureau of Census report for 1932 states that 5,438 deaths were due to malignant tumors of the prostate gland, approximately a 3 per cent increase over the year 1930. Reports indicate that only from 2 to 5 per cent of these malignancies are confined within the capsule of the prostate, that from 30 to 50 per cent have bone metastases, and that at least 10 per cent show lymphatic involvement. In view of these significant figures, it is not surprising that any discussion of the treatment of prostatic neoplasm is productive of much difference of opinion.

In deciding upon the type of treatment, several factors must be considered, among which might be mentioned: the difficulty of early diagnosis, the presence or absence of metastases, previous treatment, and whether or not there is obstruction of the bladder neck. Most writers agree that, in the early stages, the symptoms of prostatic cancer are silent, that growth and metastases are slow, but that infiltration is rapid.

Clinically, we may divide our cases into two groups, according to the physical findings.

Group One: Those apparently early cases where the cancer is located within the capsule of the prostate, with areas of marked induration (stony hardness) and fixation of the gland.

Group Two: The late cases with infiltration of the contiguous structures, with or without metastases and urinary symptoms.

In Group One, the stony hardness and fixation can be palpated rectally, and in addition evidence

of the fixed prostate may be seen on cysto-urethroscopic examination. Where there is infiltration of the prostate and the adjoining structures, there is little, if any dilatation observed on filling the posterior urethra with water. Radical surgery is unquestionably the method of choice in the treatment of this group, as it offers the only opportunity of permanent cure. X-ray therapy, according to the method of Schmidt, Grauer and Jenkinson or other accepted methods, should precede operation, in order to block the radio-sensitive cells of the cancerous prostate, and the nodes into which the lymphatics of the prostate drain. The importance of this procedure can be realized when one reviews the lymphatic systems which drain the prostate. The three groups are:

First, the lateral chain of lymphatics, which enter the nodes about the external iliac artery.

Second, the central group, which drains the seminal vesicles along with the prostate, and enters the nodes near the bifurcation of the aorta.

Third, the posterior group, which enters the presacral nodes near the hypogastric artery.

It is through these three chains that the primary metastasis occurs, although the secondary bone metastasis is blood-borne. It should be emphasized that the handling of the prostate during operation may cause a discharge of cancer cells into the blood stream with resultant metastases, and that, therefore, the use of the x-ray should precede surgery.

In Group Two, or those cases without urinary symptoms, and with negative x-ray findings in which there is an infiltration of the immediate contiguous structures, the treatment should be the same as Group One, with the addition of radium implants, seeds, or needles; these being inserted into the infiltrated areas where excision is contraindicated or impossible. Those cases with urinary obstruction should be treated by common sense, practical procedures alone, these being methods directed toward the relief of obstruction and the comfort of the patient. Those cases having metastasis and urinary obstruction may be treated by the following methods:

1. Partial perineal prostatectomy, with radium implantation into the remaining portion of the gland.

2. Perineal exposure of the prostate, with the implantation of radium under direct vision into the gland and invaded contiguous structures.

3. Suprapubic exposures of the prostate through a cystotomy opening, and partial removal of the gland and radium implantations according to the Ferguson Technique.

4. Transurethral resection of the obstruction, combined with suprapubic cystotomy and radium implantation.

5. Transurethral resection of the obstruction and deep irradiation.

For those cases in Group Two in which any operative interference is contraindicated, the following palliative measures may be used:

Radium implantations, through the cystoscope and deep irradiation.

Deep irradiation of the gland and areas of metastasis, with a retained urethral catheter or suprapubic permanent drain.

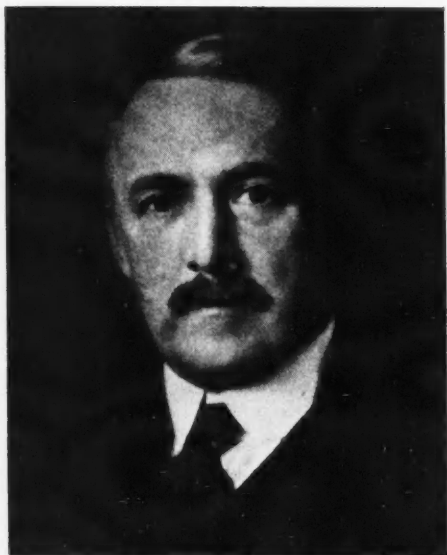
The deciding factor in the selection of any method for the treatment of cases in Group Two is usually the condition of the patient, and some cases may even need implantation of the ureters into the bowel, or to the skin where infiltration has extended into the bladder. Most writers consider the cases in Group Two inoperable, but in the last year or two, I have been able to keep patients comfortable by the use of preoperative, deep x-ray therapy and transurethral resection. The advantage of this method lies in the fact that resection can be repeated at frequent intervals with little risk to the patient, provided the bleeding points are properly coagulated. I have found that the main value of deep x-ray therapy in these patients is its relief of pain, with possibly some value in minimizing the chances of hemorrhage. Radiosensitivity is in proportion to the preponderance of cellular elements over fibrosis; thus a growth may be retarded or its size diminished by irradiation.

The importance of rectal examinations in patients over the age of fifty is emphasized in order that early diagnosis may be made, and the patient given his greatest chance for cure. Cysto-urethroscopic studies should always supplement suspicious rectal findings.

Recent Trends in Obstetric Analgesia.—Based on the statements of seventy-eight of the leading obstetricians of the country, Hunt observed that: (1) There is a great increase in scientific interest in the subject of obstetric analgesia on the part of the profession. (2) Numerous drugs in various combinations are being used in an attempt to meet the requirements under various conditions. (3) The ideal obstetric analgesia has not yet been perfected. (4) No routine method can be used in all cases, and there is no method that does not possess dangers for the mother and child unless handled with great care and intelligence. (5) The best results are obtained by being familiar with more than one method and individualizing the patient. Only large experience with various drugs will prepare the obstetrician to administer them skillfully. (6) The use of any method entails a greater expenditure of time and greater responsibility on the part of the obstetrician. (7) There is a distinct tendency away from a complete twilight sleep as well as a complete Gwathmey technique. Twilight sleep should be employed in well-equipped hospitals by those skilled in its use. The Gwathmey method is adaptable for use in homes by practitioners. (8) There seems to be an increase in the use of scopolamine combined with various methods to increase amnesia. (9) Parts of various methods are being combined. (10) There is a great increase in the use of various barbiturates and a decrease in the use of morphin and its derivatives. Barbiturates can be given earlier in labor than any other drug, with less effect on the baby. (11) The most widely used and most satisfactory barbiturate in obstetrics is pentobarbital sodium. Its combination with rectal ether-oil after the method of Irving and others enhances its action and counteracts its tendency to cause excitability. (12) Rectal ether-oil is being used extensively in combination with the barbiturates and other drugs. (13) Serious attempts are being made to find a drug that will combine the favorable features of the barbiturates and yet be free from their tendency to cause excitement.—*Northwest Medicine.*

GUEST SPEAKERS AT THE SIXTY-FIFTH ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION

Speakers at General Meetings



CAMPBELL P. HOWARD, M. D.
Professor of Medicine, McGill University
Faculty of Medicine, Montreal, Canada



FRANKLIN G. EBAUGH, M. D.
Professor of Psychology, University of Colorado
School of Medicine, Denver, Colorado



JACOB J. SINGER, M. D.
Associate Professor of Clinical Medicine,
Washington University School of Medicine,
St. Louis, Missouri



LEON ASCHER, M. D.
Professor of Physiology, University of Berne,
Berne, Switzerland

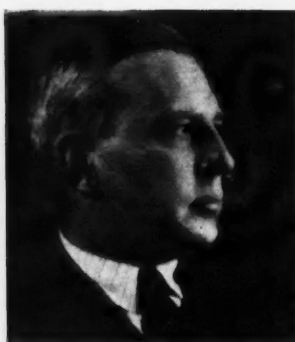


EDWARD M. PALLETTE
President-Elect

SECTION OFFICERS



FLETCHER B. TAYLOR
Chairman, General Medicine



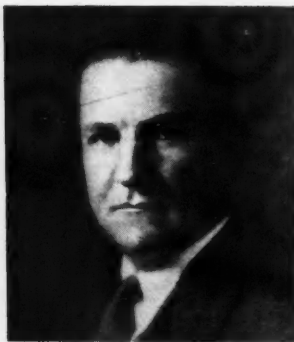
WAYLAND A. MORRISON
Chairman, General Surgery



H. A. STEPHENSON
Chairman, Obstetrics and
Gynecology



JOHN C. RUDDOCK
Secretary, General Medicine



H. GLENN BELL
Secretary, General Surgery



R. GLENN CRAIG
Secretary, Obstetrics and
Gynecology

SECTION OFFICERS



HAROLD A. FLETCHER
Chairman, Eye, Ear, Nose and
Throat



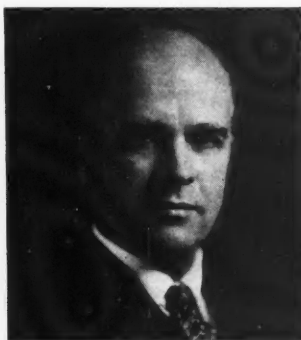
W. V. CHALMERS-FRANCIS
Chairman, Anesthesiology



WILLIAM H. GOECKERMAN
Chairman, Dermatology and
Syphilology



DEAN E. GODWIN
Secretary, Eye, Ear, Nose and
Throat



HARRY J. SMITH
Secretary, Anesthesiology



STANLEY O. CHAMBERS
Secretary, Dermatology and
Syphilology



J. MINTON MEHERIN
Chairman, Industrial Medicine
and Surgery



FREDERIC C. BOST
Secretary, Industrial Medicine
and Surgery

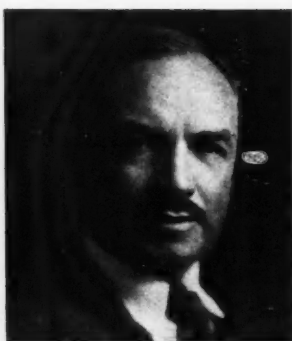


SYDNEY KINNEAR SMITH
Chairman, Neuropsychiatry

SECTION OFFICERS



J. M. NIELSEN
Secretary, Neuropsychiatry



RAWSON J. PICKARD
Chairman, Pathology and
Bacteriology



GEORGE D. MANER
Secretary, Pathology and
Bacteriology



SAM J. McCLEENDON
Chairman, Pediatrics



EDWARD B. SHAW
Secretary, Pediatrics



ALFRED C. SIEFERT
Chairman, Radiology



WILLIAM E. COSTOLOW
Secretary, Radiology



THOMAS E. GIBSON
Chairman, Urology



ADOLPH A. KUTZMANN
Secretary, Urology

PROGRAM

THE SIXTY-FIFTH ANNUAL SESSION of the CALIFORNIA MEDICAL ASSOCIATION

TO BE HELD AT

HOTEL DEL CORONADO, CORONADO, CALIFORNIA

MAY 25-28, 1936

OFFICERS AND COMMITTEES, 1936

GENERAL OFFICERS

ROBERT A. PEERS, Colfax, President
 EDWARD M. PALLETTE, Los Angeles, President-Elect
 T. HENSHAW KELLY, San Francisco, Chairman of the Council
 W. W. ROBLEE, Riverside, Speaker of House of Delegates
 JOHN H. GRAVES, San Francisco, Vice-Speaker of House of Delegates
 FREDERICK C. WARNSHUIS, San Francisco, Secretary-Treasurer
 GEORGE H. KRESS, Los Angeles, Editor
 HARTLEY F. PEART, San Francisco, General Counsel
 HUBERT T. MORROW, Los Angeles, Associate General Counsel

COUNCILORS

First District
 C. L. Emmons, Ontario (1938)
 Imperial, Orange, Riverside, San Bernardino,
 and San Diego Counties
Second District
 Carl R. Howson, Los Angeles (1936)
 Los Angeles County
Third District
 Henry J. Ullmann, Santa Barbara (1937)
 Kern, San Luis Obispo, Santa Barbara, and
 Ventura Counties
Fourth District
 Axel E. Anderson, Fresno (1938)
 Calaveras, Fresno, Inyo, Kings, Madera, Mariposa, Merced,
 Mono, San Joaquin, Stanislaus, Tulare, and
 Tuolumne Counties
Fifth District
 Alfred L. Phillips, Santa Cruz (1936)
 Monterey, San Benito, San Mateo, Santa Clara,
 and Santa Cruz Counties
Sixth District
 Karl L. Schaupp, San Francisco (1937)
 San Francisco County
Seventh District
 Oliver D. Hamlin, Oakland (1938)
 Alameda and Contra Costa Counties
Eighth District
 C. E. Schoff, Sacramento (1936)
 Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen,
 Modoc, Nevada, Placer, Plumas, Sacramento, Shasta,
 Sierra, Sutter, Tehama, Yolo, and Yuba Counties.
Ninth District
 Henry S. Rogers, Petaluma (1937)
 Del Norte, Humboldt, Lake, Marin, Mendocino, Napa,
 Siskiyou, Solano, Sonoma, and Trinity Counties
Councilors-at-Large
 Junius B. Harris, Sacramento (1937)
 Harry H. Wilson, Los Angeles (1938)
 C. O. Tanner, San Diego (1936)
 William H. Kiger, Los Angeles (1937)
 Morton R. Gibbons, San Francisco (1938)
 T. Henshaw Kelly, San Francisco (1936)

DELEGATES AND ALTERNATES TO A. M. A.

Delegates	Sessions	Alternates
C. A. Dukes	(1935-1936)	Edward N. Ewer
Oakland		Oakland
Clarence G. Toland	(1935-1936)	Edward M. Pallette
Los Angeles		Los Angeles
J. B. Harris	(1935-1936)	John H. Shephard
Sacramento		San Jose
William R. Molony, Sr.	(1935-1936)	John C. Ruddock
Los Angeles		Los Angeles
Elbridge Best	(1936-1937)	Robert S. Stone
San Francisco		San Francisco
Lyell C. Kinney	(1936-1937)	Harry H. Wilson
San Diego		Los Angeles
Fred B. Clarke	(1936-1937)	A. J. Scott
Long Beach		Los Angeles

STANDING COMMITTEES

Executive Committee

The President, the President-Elect, the Speaker of the House of Delegates, the Chairman of the Council, the Secretary-Treasurer, the Editor, and the Chairman of the Auditing Committee, the Chairman of the Committee on Public Relations. (Committee Chairman, Karl L. Schaupp; Secretary, Frederick C. Warnshuis.)

Auditing Committee

Karl L. Schaupp (Chairman).....San Francisco
 O. D. Hamlin.....Oakland
 Morton R. Gibbons.....San Francisco

Committee on Associated Societies and Technical Groups

William H. Geistweitz, San Diego.....1936
 John V. Barrow, Los Angeles.....1937
 William J. Kerr (Chairman), San Francisco.....1938

Committee on Health and Public Instruction

W. R. P. Clark, San Francisco.....1936
 Benjamin W. Black, Oakland.....1937
 Fred B. Clarke (Chairman), Long Beach.....1938

Committee on History and Obituaries

J. Marion Read, San Francisco.....1936
 George D. Lyman (Chairman), San Francisco.....1937
 Frank R. Makinson, Oakland.....1938
 The Secretary.....Ex officio
 The Editor.....Ex officio

Committee on Hospitals, Dispensaries, and Clinics

Daniel Crosby (Chairman), Oakland.....1936
 Karl L. Schaupp, San Francisco.....1937
 John C. Ruddock, Los Angeles.....1938

Committee on Industrial Practice

Mott H. Arnold, San Diego.....1936
 Harry E. Zaiser, Orange.....1937
 Morton R. Gibbons (Chairman), San Francisco.....1938

Committee on Medical Defense

Fred R. De Lappe, Modesto.....1936
 John P. Nuttall, Santa Monica.....1937
 George G. Reinle (Chairman), Oakland.....1938

Committee on Medical Economics

William R. Molony, Sr., Los Angeles.....1936
 Willard Stone, Pasadena.....1937
 John H. Graves (Chairman), San Francisco.....1938

Committee on Medical Education and Medical Institutions

Loren R. Chandler (Chairman), San Francisco.....1936
 John B. Doyle, Los Angeles.....1937
 B. O. Raulston, Los Angeles.....1938

Committee on Membership and Organization

Dewey R. Powell, Stockton.....1936
 Thomas H. McGavack, San Francisco.....1937
 E. Vincent Askey (Chairman), Los Angeles.....1938
 The Secretary.....Ex officio

Committee on Postgraduate Activities

F. F. Gundrum, Sacramento.....1936
 John C. Ruddock, Los Angeles.....1937
 Clarence G. Toland (Chairman), Los Angeles.....1938
 The Secretary.....Ex officio

Committee on Publications

Oscar Reiss, Los Angeles.....1936
 Percy T. Magan (Chairman), Los Angeles.....1937
 Ruggles A. Cushman, Talmage.....1938
 The Secretary.....Ex officio
 The Editor.....Ex officio

Committee on Public Policy and Legislation

Fred R. De Lappe, Modesto.....1936
 E. T. Remmen, Glendale.....1937
 Junius B. Harris (Chairman), Sacramento.....1938
 The President.....Ex officio
 The President-Elect.....Ex officio

Committee on Scientific Work

F. M. Pottenger, Monrovia.....1936
 Lemuel P. Adams, Oakland.....1937
 J. Homer Woolsey, Woodland.....1938
 John C. Ruddock, Secretary of Section on Gen-
 eral Medicine.....Ex officio

H. Glenn Bell, Secretary of Section on General
 Surgery.....Ex officio
 Frederick C. Warnshuis (Chairman).....Ex officio

Committee on Public Relations

The Committee on Public Relations consists of the chairmen of the following standing committees and of certain general officers of the Association, who serve ex officio. The chairman of the committee is Dr. Charles

A. Dukes, the secretary is Dr. Frederick C. Warnshuis. The director of the Department of Public Relations is Dr. Frederick C. Warnshuis.
 Fred B. Clarke, Chairman, Committee on Health and Public Instruction.
 Daniel Crosby, Chairman, Committee on Hospitals, Dispensaries, Clinics.
 Morton R. Gibbons, Chairman, Committee on Industrial Practice.
 E. Vincent Askey, Chairman, Committee on Membership and Organization.
 John H. Graves, Chairman, Committee on Medical Economics.
 Junius B. Harris, Chairman, Committee on Public Policy and Legislation.
 Charles A. Dukes, Chairman, Cancer Commission.
 Robert A. Peers, President of the California Medical Association.
 Edward M. Pallette, President-Elect.
 Frederick C. Warnshuis, Secretary-Treasurer.
 Communications for the Public Relations Department should be addressed to the director, Dr. Frederick C. Warnshuis, Room 2004, 450 Sutter Street, San Francisco.

Cancer Commission

Harold Brunn, San Francisco.....	1936
Henry J. Ullmann, Santa Barbara.....	1936
Clarence G. Toland, Los Angeles.....	1936
Charles A. Dukes (Chairman), Oakland.....	1937
Lyell C. Kinney (Vice-Chairman), San Diego.....	1937
Alson R. Kilgore (Secretary), San Francisco.....	1937
Orville Meland (Secretary for Southern Section), Los Angeles.....	1938
A. Herman Zeiler, Los Angeles.....	1938
Gertrude Moore, Oakland.....	1938

Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2004, 450 Sutter Street, San Francisco.

SPECIAL COMMITTEES

Committee on Arrangements—Coronado Annual Session

C. O. Tanner (Chairman), San Diego
 Harold D. Barnard, Los Angeles
 Ralph Kaysen, San Diego
 R. C. Lounsbury, San Diego
 C. V. Bernardini, San Diego

Committee on Disciplinary Procedures

W. W. Roblee (Chairman).....	Riverside
L. A. Packard.....	Bakersfield
Oscar Reiss.....	Los Angeles
C. Kelly Canelo.....	San Jose
E. Vincent Askey.....	Los Angeles

Committee of Five

William R. Molony (Chairman).....	Los Angeles
Harry H. Wilson (Secretary).....	Los Angeles
Alson R. Kilgore.....	San Francisco
Robert A. Peers.....	Colfax
Rodney A. Yoell.....	San Francisco

Committee on Qualifying Certificate (Basic Science) Act

George H. Kress, General Chairman
 Morton R. Gibbons, Chairman (for Bay Region)
 Percy T. Magan, Chairman (for Southern California)
 Junius B. Harris, Chairman (for Remainder of State)

Committee on Maternal Welfare

T. Henshaw Kelly.....	San Francisco
Lyle G. McNelle.....	Los Angeles
Ralph J. Thompson.....	Los Angeles
T. Floyd Bell.....	Oakland
Hans F. Schluter.....	Sacramento

Committee on Tax-Supported Hospitals and Medical Care

Axel E. Anderson (Chairman).....	Fresno
Louis A. Packard.....	Bakersfield
Earl E. Moody.....	Los Angeles

REGISTRATION INFORMATION

Registration and Information.—The registration and information desk is located in the lobby, Coronado Hotel. All persons attending the convention, whether members or not, are requested to register immediately on arrival. Beginning Monday, May 25, registration secretaries will be on duty daily from 9 a. m. until 5 p. m.

Programs and "Pre-Convention Bulletin."—The registration clerks will give to every member a copy of the program. The "Pre-Convention Bulletin" will be printed in the May issue of CALIFORNIA AND WESTERN MEDICINE. Delegates and alternates are especially requested to read the reports of officers and committees.

Guests and Visitors.—All guests and visitors are requested to register. All general meetings and scientific meetings are open to visitors and guests.

Badges.—Four kinds of badges will be issued by the registration bureau:

1. **Members.**—Only active, associate, retired or honorary members of the California Medical Association will be issued the usual membership badge.

2. **Guests.**—A guest badge will be issued to all fraternal delegates and visiting physicians who are attending the 1936 session.

3. **Delegates and Alternates.**—The usual official badge for each delegate and alternate is provided for this purpose, and will be issued only to one authorized to wear it.

4. **Officers.**—An official badge is provided for all officers and members of the Council.

Suggestions and Constructive Criticism.—The officers and committees have tried to do everything possible to make the session a success. Suggestions and constructive criticism calculated to make future sessions more useful will be welcomed by any of the officers. Complaints of whatever character should be promptly made at the registration desk, where they will receive attention.

Announcements

Please register on arrival and secure program and special announcements. Registration Bureau, Coronado Hotel.

Delegates will please file credentials with committee at 7:30 p. m., Monday, May 25.

Secure tickets for President's Dinner at Registration Bureau. Dinner will be in Coronado Hotel dining room.

Please note meeting time of sections. Chairmen will be prompt in opening section meetings.

Commercial exhibitors cordially invite all members to visit their exhibits.

Past President's Breakfast, 7:30 a. m., Tuesday, May 26.

Council will meet at call of the chairman.

COMMERCIAL EXHIBITS

Aloe Company, A. S., 932 South Hill Street, Los Angeles. Booth No. 11.

Ayerst, McKenna & Harrison, Ltd., Rouses Point, New York. Booth No. 12.

Bard-Parker Company, Inc., Danbury, Connecticut. Booth No. 10.

Baxter, Inc., Don, 1505 Gardena Avenue, Glendale. Booth No. 9.

Bilhuber-Knoll Corp., 154 Ogden Avenue, Jersey City, New Jersey. Booth No. 26.

Certified Laboratory Products, Ltd., 1379 Folsom Street, San Francisco. Booth No. 21.

Coca-Cola Company, Atlanta, Georgia. Booth No. 20.

Cutter Laboratory, Berkeley. Booth No. 16.

Gerber Products Company, Fremont, Michigan. Booth No. 3.

Golden State Company, Ltd., 425 Battery Street, San Francisco. Booth No. 13.

Heinz Company, H. J., Pittsburgh, Pennsylvania. Booth No. 34.

Lea & Febiger, 600 South Washington Square, Philadelphia, Pennsylvania. Booth No. 22.

Lepel High Frequency Laboratories, 39 West Sixtieth Street, New York. Booth No. 23.

Libby, McNeill & Libby, Chicago. Booth No. 28.

Mead Johnson & Company, Evansville, Indiana. Booth No. 27.

Medical Protective Company, Wheaton, Illinois. Booth No. 24.

Merck & Company, Inc., Rahway, New Jersey. Booth No. 31.

Morris & Company, Ltd., Philip, 119 Fifth Avenue, New York. Booth No. 15.

Petrolagar Laboratories, 8134 McCormick Boulevard, Chicago. Booth No. 14.

Physicians' Supply Company, 1131 Fourth Street, San Diego. Booths 5 and 6.

Rhythm Foundation, Russ Building, San Francisco. Booth No. 32.

Scherer Company, R. L., 736 South Flower Street, Los Angeles. Booths Nos. 5 and 6.

S. M. A. West Coast Company, 4614 Prospect Avenue, Cleveland, Ohio. Booth No. 30.

Spicer & Company, 920 East Broadway, Glendale. Booth No. 4.

Stacey, Inc., J. W., 870 Market Street, San Francisco. Booths Nos. 1 and 2.

Western Surgical Supply Company, Ltd., 1926 Wilshire Boulevard, Los Angeles. Booth No. 7.

Zweegman School for Medical Secretaries, 450 Sutter Street, San Francisco. Booth No. 25.

MEMBERS OF HOUSE OF DELEGATES—33rd ANNUAL SESSION

DELEGATES EX OFFICIO (21)

Robert A. Peers, Colfax.....President
 Edward M. Pallette, Los Angeles.....President-Elect
 Frederick C. Warnshuis, San Francisco.....Secretary-Treasurer
 William W. Roblee, Riverside.....Speaker of the House of Delegates
 John H. Graves, San Francisco.....Vice-Speaker of the House of Delegates
 George H. Kress, Los Angeles.....Editor
 C. L. Emmons, Riverside (1938).....Councilor 1st District
 Carl R. Howson, Los Angeles (1936).....Councilor 2nd District
 Henry J. Ullmann, Santa Barbara (1937).....Councilor 3rd District
 Axel E. Anderson, Fresno (1938).....Councilor 4th District
 Alfred L. Phillips, Santa Cruz (1936).....Councilor 5th District
 Karl L. Schaupp, San Francisco (1937).....Councilor 6th District
 Oliver D. Hamlin, Oakland (1938).....Councilor 7th District
 C. E. Schoff, Sacramento (1936).....Councilor 8th District
 Henry S. Rogers, Petaluma (1937).....Councilor 9th District
 Harry H. Wilson, Los Angeles (1938).....Councilor-at-Large
 C. O. Tanner, San Diego (1936).....Councilor-at-Large
 William H. Kiger, Los Angeles (1937).....Councilor-at-Large
 Morton R. Gibbons, San Francisco (1938).....Councilor-at-Large
 T. Henshaw Kelly, San Francisco (1936).....Councilor-at-Large
 Junius B. Harris, Sacramento (1937).....Councilor-at-Large

ELECTED DELEGATES (123)

Delegates	Alternates
Alameda County (10)	Dorothy M. Allen
L. P. Adams	W. G. Donald
Leonard B. Barnard	C. B. Fowler
Daniel Crosby	Charles C. Hall
John A. Dougherty	W. F. Holcomb
C. A. Dukes	Lloyd E. Kindall
E. N. Ewer	Jefferson Larkley
T. C. Lawson	Robert S. Leet
Roy F. Nelson	C. J. Lunsford
G. G. Reine	Robert S. Peers
Hobart Rogers	
Butte County (1)	N. T. Enloe
J. O. Chiappella	
Contra Costa County (1)	William S. Lucas
Solomon N. Weil	
Fresno County (3)	R. W. Dahlgren
G. W. Walker	K. D. Luechauer
H. A. Randel	E. R. Scarbore
N. J. Dau	
Humboldt County (1)	Wilson Stegeman
Lane Falk	
Imperial County (1)	Philip Hodgkin
Lewis C. House	
Kern County (1)	F. J. Gundry
Louis A. Packard	
Kings County (1)	W. F. Chamlee
E. C. Foster	
Lassen-Plumas-Modoc Counties (1)	G. S. Martin
Fred J. Davis	
Los Angeles County (40)	Walter A. Bayley
E. Vincent Askey	Frank J. Breslin
E. M. Burns	E. L. Commons
George Dock	John W. Crossan
Leland W. Ellis	Egerton L. Crispin
Ralph B. Eusden	William H. Daniel
Orrie E. Ghrist	Philip S. Doane
W. V. Chalmers-Francis	John B. Doyle
Lowell S. Goin	John D. Gillis
L. L. Henninger	Bernard J. Hanley
George D. Maner	Louis Josephs
Orville N. Meland	A. A. Kutzmann
J. W. Nevius	W. P. Kroger
Sterling N. Pierce	Samuel S. Mathews
E. T. Remmen	W. A. Morrison
John C. Ruddock	F. M. Pottenger
Carl F. Rusche	H. E. Schiffbauer
Raymond A. Sands	Willard J. Stone
F. C. Swearingen	A. H. Zeller
Arthur R. Timme	Elliot Alden
E. Richmond Ware	L. A. Aleson
Harold Dewey Barnard	C. Max Anderson
John V. Barrow	A. Elmer Belt
Fred B. Clarke	F. H. Brandt
William Duffield	Harry V. Brown
Walter L. Huggins	Martin G. Carter
E. Eric Larson	Kenneth S. Davis
Percy T. Magan	Edward T. Dillon
William R. Molony	Albert L. Hill
Thomas Chalmers Myers	W. J. Lakey
John P. Nuttall	Francis M. McKeever
Francis M. Pottenger	Lyle G. McNeile
James F. Percy	Carl L. Mulfinger
Robert E. Ramsay	William H. Olds
Oscar Reiss	H. A. Putnam
Harlan Shoemaker	B. O. Raulston
Philip H. Stephens	John W. Shuman
Charles T. Sturgeon	Packard Thurber
Raymond G. Taylor	Robert A. Walker
Clarence G. Toland	Nelson A. Young
Walter F. Wessels	

Delegates	Alternates
Marin County (1)	R. M. Furlong
Carl W. Clark	
Mendocino-Lake Counties (1)	Raymond Babcock
R. A. Cushman	
Merced County (1)	Fred O. Lien
Hartley G. Dewey	
Monterey County (1)	J. H. McPharlin
Mast Wolfson	
Napa County (1)	George I. Dawson
Allen K. McGrath	
Orange County (3)	F. H. Gobar
D. R. Ball	R. P. Yeagle
G. W. Olson	M. W. Hollingsworth
H. G. Huffman	
Placer County (1)	Mildred E. Thoren
Lucas W. Empey	
Riverside County (2)	N. K. Bear
G. Wayland Coon	H. S. Faris
Bon O. Adams	
Sacramento County (3)	Dave F. Dozier
Oscar F. Johnson	Paul W. Christman
Nathan G. Hale	Orrin S. Cook
F. N. Scatena	
San Benito County (1)	E. C. Sheldon
J. M. O'Donnell	
San Bernardino County (3)	Carl M. Hadley
Walter Pritchard	Philip W. Lawler
H. M. Walton	A. L. Weber
H. G. Gentry	
San Diego County (5)	George D. Huff
Fraser L. Macpherson	James F. Churchill
Martha A. Welpton	W. H. Geistweil, Jr.
W. H. Barrow	C. R. Lounsberry
Elmo G. Crabtree	W. M. Alberty
S. J. McClendon	
San Francisco County (17)	George H. Becker
Rea E. Ashley	H. Glenn Bell
Dorothy W. Atkinson	LeRoy Brooks
Elbridge J. Best	A. Lincoln Brown
Zera E. Bolin	Howard A. Brown
Edwin L. Bruck	William A. Carroll
Loren R. Chandler	Donald A. Carson
G. Dan Delprat	Garnett Cheney
J. C. Geiger	John W. Cline
Philip K. Gilman	Rudolph L. Dresel
George N. Hosford	Ernst Gehrels
Irving S. Ingber	Thomas H. McGavack
Alson R. Kilgore	Frederick L. Reichert
Mary Jones Mentzer	John J. Sampson
Stanley H. Mentzer	Roland P. Seltz
George Warren Pierce	David A. Wood
Robert S. Stone	Rodney A. Yoell
Wilber F. Swett	
San Joaquin County (2)	T. C. O'Connor
D. R. Powell	M. H. Smyth
C. A. Broadbuss	
San Luis Obispo County (1)	D. A. Crew
C. J. Teass	
San Mateo County (1)	Hartzell Ray
J. Garwood Bridgman	
Santa Barbara County (3)	P. A. Gray
Rodney Atsatt	H. E. Henderson
Hugh H. Freidell	W. H. Eaton
Richard Evans	
Santa Clara County (4)	James P. Lovely
C. M. Burchfiel	George L. Barry
C. Kelly Canelo	John H. Shepard
R. S. Kneeshaw	Merlin T. R. Maynard
Russell V. Lee	
Santa Cruz County (1)	E. H. Eiskamp
Stanley W. Dowling	
Shasta County (1)	G. Leslie Kay
F. H. Olberg	
Siskiyou County (1)	C. C. Dickinson
V. W. Hart	
Solano County (1)	Warren C. Jenney
John W. Green	
Sonoma County (2)	Carol B. Andrews
Paul T. Quarry	Mark L. Lewis
F. O. Butler	
Stanislaus County (1)	R. S. Hiatt
Donald L. Robertson	
Tehama County (1)	F. J. Bailey
R. C. Frey	
Tulare County (1)	Karl F. Weiss
Ray W. Rosson	
Ventura County (1)	Arlo A. Morrison
Grundy C. Coffey	
Yolo-Colusa-Glenn Counties (1)	Tom H. Brown
C. A. Poage	
Yuba-Sutter Counties (1)	T. E. Lerner
R. Lucien Hamilton	

DAILY SCHEDULE

Sunday, May 24

- 9:00 a. m. to 4:30 p. m.—Clinical Pathological Conference.
 2:00 p. m.—Meeting of chairmen and members of standing and special committees.
 8:00 p. m.—Council meeting.*

Monday, May 25

- 10:00 a. m.—Opening general meeting.
 2:00 p. m.—Section meetings.
 7:30 p. m.—House of Delegates.

Tuesday, May 26

- 7:30 a. m.—Past president's breakfast.

* The Council meets each day during the annual session.

- 8:30 a. m.—Section meetings.
 11:15 a. m.—General meeting.
 12:30 noon—Luncheon of State and County Society officers.
 1:00 to 6:00 p. m.—Recreation.
 7:15 p. m.—President's dinner.

Wednesday, May 27

- 8:30 a. m.—Section meetings.
 11:15 a. m.—General meeting.
 2:00 p. m.—Section meetings.
 7:30 p. m.—House of Delegates.

Thursday, May 28

- 8:30 a. m.—Section meetings.

I—GENERAL MEETINGS

All General Meetings will be held in the Ballroom, Hotel Del Coronado

Monday, May 25, 10:00 A. M.

1. *Address of Welcome*—Benjamin F. Eager, M. D., President, San Diego County Medical Society.
2. *Address of Welcome*—Captain F. E. Porter, Commanding Officer, United States Naval Hospital, San Diego.
3. *President's Address*—Robert A. Peers, M. D., Colfax.
4. *Newer Methods in the Treatment of Pulmonary Tuberculosis*—Jacob J. Singer, M. D., Associate Professor of Clinical Medicine, Washington University School of Medicine, St. Louis.

Tuesday, May 26, 11:15 A. M.

1. *Clinico-Pathological Conference*—Conducted by P. Campbell Howard, M. D., Professor of Medicine, McGill University Faculty of Medicine, Montreal.
 This conference will present selected cases, with comments by the chairman, after the presentation of case history, laboratory work, and post-

mortem findings. An opportunity will be given members of the Society to ask questions pertinent to the subject.

The following cases will be presented:

- Case 1: Laborer, age 55. Precordial Pain?
 Case 2: Female, age 40. Brain Tumor?
 Case 3: Female, age 34. Hodgkin's Disease?
 Case 4: Male, age 43. Intermittent Fever?

Copies of clinical histories will be given to all attending this clinico-pathological conference.

Wednesday, May 27, 11:15 A. M.

1. *Sleep Disturbances in Clinical Practice*—Franklin G. Ebaugh, M. D., Professor of Psychology, University of Colorado School of Medicine, Denver.
2. *Synergic Reaction of Hormones*—Leon Ascher, M. D., Professor of Physiology, University of Berne. (Practical application of established theories of their physiological action.)

II—HOUSE OF DELEGATES MEETINGS

33rd ANNUAL SESSION—HOTEL DEL CORONADO

Speaker, W. W. ROBLEE, Riverside

Vice-Speaker, J. M. GRAVES, San Francisco

Secretary, FREDERICK C. WARNSHUIS, San Francisco

FIRST SESSION

Monday, May 25, 7:30 P. M.

Main Ballroom

Order of Business

1. Call to order.
2. Report of Credentials Committee.
3. Roll call.
4. Announcement by the Speaker of Reference Committees:
 - (a) Report of Officers, Standing and Special Committees.
 - (b) Credentials Committee.
 - (c) Resolutions, New and Miscellaneous Business.
5. Address by President Robert A. Peers.
6. Report of the Council, T. Henshaw Kelly, Chairman.
7. Report of the Auditing Committee, Karl L. Schaupp, Chairman.
8. Report of the Secretary-Treasurer, Frederick C. Warnshuis.
9. Report of the Editor, George H. Kress.
10. Report of the General Counsel, Hartley F. Peart.
11. Report of the Chairman of the Committee on Public Relations, Charles A. Dukes.
12. Report of the Chairman of the Cancer Commission, Charles A. Dukes.
13. Report of The Trustees Of The California Medical Association, T. Henshaw Kelly, President.
14. Report of Special Committees:
 - (a) Protective Insurance—George G. Reinie.
 - (b) Disciplinary Procedure—W. W. Roblee.
 - (c) County Hospitals—A. C. Anderson.
 - (d) Committee of Five—W. R. Molony.
 - (e) Committee on Postgraduate Work—C. G. Toland.
 - (f) Committee on Qualifying Certificate (Basic Science) Law.
15. Unfinished business.
16. Introduction of resolutions and new business.
 (Note: All resolutions must be presented in writing and with triplicate copies.)
17. Amendments to Constitution and By-Laws.
18. Minutes of the meeting.
19. Adjournment.

SECOND SESSION

Wednesday, May 27, 7:30 P. M.

Main Ballroom

Order of Business

1. Call to order.
2. Roll call.
3. Announcement of meeting place of 1937 annual session.
4. Election of:
 - (a) President-Elect.
 - (b) Speaker of the House of Delegates.
 - (c) Vice-Speaker of House of Delegates.
 - (d) Councilors:
 - Second District—Incumbent, Carl R. Howson, Los Angeles.
 - Fifth District—Incumbent, Alfred L. Phillips, Santa Cruz.
 - Eighth District—Incumbent, C. E. Schoff, Sacramento.
 - (e) Councilors-at-Large—Incumbents:
 - C. O. Tanner, San Diego.
 - T. Henshaw Kelly, San Francisco.
 - (f) Delegates to the American Medical Association—Incumbents:
 - C. A. Dukes, Oakland.
 - Clarence G. Toland, Los Angeles.
 - Junius B. Harris, Sacramento.
 - William R. Molony, Los Angeles.
 - (g) Alternate Delegates to American Medical Association—Incumbents:
 - Edward N. Ewer, Oakland.
 - Edward M. Paillette, Los Angeles.
 - John Hunt Shephard, San Jose.
 - John C. Raddock, Los Angeles.
5. Announcement and approval of members of standing committees elected by the Council.
6. Report of Reference Committee on Report of Officers, Standing and Special Committees.
7. Report of Reference Committee on Resolutions, New and Miscellaneous Business.
8. Presentation of the President.
9. Presentation of President-Elect.
10. Minutes of the meeting.
11. Adjournment.

Table I—Time and Places of Various Meetings and Entertainment

Place	Monday, May 25		Tuesday, May 26		Wednesday, May 27		Thursday, May 28	
	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.	A. M.	P. M.
Ballroom	General Meeting	Medicine	Medicine and General Meeting	ENTERTAINMENT OPEN AFTERNOON	Medicine and General Meeting	Symposium Medicine, Surgery and Radiology		
Crown Dining Room		Surgery	Surgery		Surgery		Surgery	
Casino		Obstetrics and Gynecology	Industrial Medicine and Surgery		Industrial Medicine and Surgery	Obstetrics and Gynecology	Anesthesiology	
Patio Dining Room		Pediatrics	Eye, Ear, Nose and Throat		Eye, Ear, Nose and Throat	Pediatrics	Eye, Ear, Nose and Throat	
Grill Room		Neuropsychiatry	Neuropsychiatry		Neuropsychiatry	Anesthesiology		
Bridge Room		Radiology	Urology		Radiology	Urology		
Vestibule A		Dermatology	Dermatology					
Vestibule B		Pathology	Pathology		Pathology			
Dining Room			Past-President's Breakfast, 7:30 County Secretaries' Luncheon, 12:30 p. m.	Dinner to the President				
Gold Room	Council*							

* The Council meets each day during the annual session.

San Diego Exposition, Wednesday, 2 p. m.—Lay public meeting in Open-Air Auditorium.

OTHER MEETINGS

COUNCIL MEETINGS

The Council meets each day during the annual session, hour of meetings being determined at each previous meeting.

CONFERENCE OF MEMBERS OF STANDING AND SPECIAL COMMITTEES

Sunday, May 24, 2 P. M., Main Ballroom

By Council action, this conference is arranged in order that the chairmen and members of standing and special committees may obtain a clearer insight of the problems of our Association. Following the presentation of these problems the several committees will hold committee meetings for the purpose of formulating recommendations for presentation to the House of Delegates, and to outline the committee work for the coming year.

All committee members are urged to arrange to attend this conference. It is an obligation of every member of a committee.

1. Opening Statement—T. Henshaw Kelly.
2. Purposes of Conference—George H. Kress.
3. Headquarter's Contacts—F. C. Warnshuis.
4. Standing and Special Committee Functions—Five-minute presentations by Committee Chairmen.
5. General Recommendations.
6. Committees will hold committee meetings upon adjournment.

CANCER COMMISSION PATHOLOGY CONFERENCE

Sunday, May 24, 9 A. M. to 4:30 P. M.

Zoological Research Hospital, Balboa Park, San Diego

Case histories, x-rays, laboratory reports, etc., will be presented and each member attending will be given microscopic slides for diagnosis, following which the pathology will be discussed by the demonstrators.

The number attending will be limited to forty, and members should register with the secretary of the

Cancer Commission, 450 Sutter Street, San Francisco, and reserve places.

Each member attending is requested to bring his own microscope.

CANCER COMMISSION RADIOLOGY CONFERENCE

Sunday, May 24, 9 A. M. to 4:30 P. M.

Hotel Del Coronado, Coronado

Films of cases of unusual diagnostic interest will be presented for study and discussion by the members. Problems of radiotherapy will also be presented for group discussion.

Accommodations will be limited, and members desiring to attend should register with the secretary of the Cancer Commission, 450 Sutter Street, San Francisco.

SUGGESTIONS

Members will receive the most from their attendance if they will be guided by the following suggestions:

1. Register on arrival.
2. Note on Daily Schedule in this program the sessions and sections you desire to attend.
3. Secure your president's dinner ticket *before Tuesday noon*.
4. Visit the Commercial and Scientific exhibits at every opportunity.
5. Send your name to the Section Chairman if you wish to discuss a given paper. (Forms in back of program.)
6. Reduced admission tickets to the Exposition can be obtained at the registration desk.
7. Special seats for visitors attending sessions of the House of Delegates.
8. Watch the daily bulletin board at the registration desk.
9. Wear your badge.
10. The information desk is for your convenience.

Table II—Schematic Plan of Section Meetings

Date	Section	Place of Meeting	Papers Presented
Monday May 25 2 p. m.	General Medicine General Surgery Obstetrics and Gynecology Dermatology and Syphilology Neuropsychiatry Pathology and Bacteriology Pediatrics Radiology	Ball Room Crown Dining Room Casino Vestibule A Grill Room Vestibule B Patio Dining Room Bridge Room	1, 2, 3, 4, 5 21, 22, 23, 24, 25, 26 43, 44, 45, 46, 47 70, 71, 72, 73, 74, 75 93, 94, 95, 96 105, 106, 107, 108, 109, 110 120, 121, 122, 123, 124 131, 132, 133, 134, 135
Tuesday May 26 8:30 a. m.	General Medicine General Surgery Eye, Ear, Nose and Throat Dermatology and Syphilology Industrial Medicine and Surgery Neuropsychiatry Pathology and Bacteriology Urology	Ball Room Crown Dining Room Patio Dining Room Vestibule A Casino Grill Room Vestibule B Bridge Room	6, 7, 8, 9, 10 27, 28, 29, 30, 31 52, 53, 54, 55 76, 77, 78, 79, 80, 81, 82 83, 84, 85, 86, 87 97, 98, 99, 100 111, 112, 113, 114, 115 139, 140, 141, 142, 143, 144
Wednesday May 27 8:30 a. m.	General Medicine General Surgery Eye, Ear, Nose and Throat Industrial Medicine and Surgery Neuropsychiatry Pathology and Bacteriology Radiology	Ball Room Crown Dining Room Patio Dining Room Casino Grill Room Vestibule B Bridge Room	11, 12, 13, 14, 15 32, 33, 34, 35, 36 56, 57, 58, 59 88, 89, 90, 91, 92 101, 102, 103, 104 116, 117, 118, 119 136, 137, 138
Wednesday May 27 2 p. m.	General Medicine, General Surgery, and Radiology Obstetrics and Gynecology Anesthesiology Pediatrics Urology	Ball Room Casino Grill Room Patio Dining Room Bridge Room	16, 17, 18, 19, 20 48, 49, 50, 51 64, 65, 66 125, 126, 127, 128, 129, 130 145, 146, 147, 148, 149, 150
Thursday May 28 8:30 a. m.	General Surgery Eye, Ear, Nose and Throat Anesthesiology	Crown Dining Room Patio Dining Room Casino	37, 38, 39, 40, 41, 42 60, 61, 62, 63 67, 68, 69

III—SCIENTIFIC EXHIBITS

Mezzanine Floor—Hotel Del Coronado

1. *Plastic and Reconstruction Surgery*—George Warren Pierce, M.D., and Gerald Brown O'Connor, M.D., 490 Post Street, San Francisco.

This exhibit shows a group of photographs of various types of deformities with corrections by means of plastic and reconstruction surgery. Several of the cases exhibited show the different stages of the procedures. Some show cases not completed, but sufficient to demonstrate the method of problem attack.

2. *Reconstructive Plastic and Oral Surgery*—Arthur E. Smith, M.D., 1930 Wilshire Boulevard, Los Angeles.

Two hundred illuminated, transparent photographs will be exhibited. These show the pre-operative condition and reconstructive surgical results of the following cases: cleft palate and lip; crushed face and jaws; corrective rhinoplasty; skin-grafting to face and neck; reconstruction of ears, eyelids, and lips; bone grafts of mandible; fractured facial and jaw bones.

3. *Cancer of the Rectum*—William H. Daniel, M.D., 1930 Wilshire Boulevard, Los Angeles.

The subject of rectal cancer will be covered by showing some statistics, by photographs, by specimens showing different types of growths, and by a motion picture which illustrates the technique of examination, biopsy, and the two chief surgical procedures. It is the endeavor to stimulate interest in this subject by calling attention to the symptomatology and the methods of examination.

4. *Cottage Hospital Fever Therapy Apparatus*—Rodney F. Atsatt, M.D., 1421 State Street, Santa Barbara.

A simple and safe apparatus for the production of fever therapy is exhibited. It has been

in use for two years. Hot moist air (conditioned air) is the modality. Coarse and fine temperature control is possible. Absolute safety for patient is inherent. Suggestions as to technique are part of exhibit.

5. *Acute Perforation of Peptic Ulcer or Goiter*—Harold L. Thompson, M.D., 1930 Wilshire Boulevard, Los Angeles.

The exhibit will consist of charts, diagrams, and pathologic specimens, which illustrate salient points in the etiology, pathology, diagnosis, and results of treatment in acute perforation of peptic ulcer. The exhibit is based on my study of clinical records of five hundred cases.

6. *Some Common Corporeal Anomalies, with Technique and Results of Correction*—H. O. Barnes, M.D., 1134 Roosevelt Building, Los Angeles.

This exhibit portrays some frequently encountered anomalies of corporeal development which cause physical symptoms in proportion to their size, and mental distress in proportion to their variation from the esthetic ideal. Deformity varies with position, hence each case shows in several positions: (1) The condition actually complained of. (2) Delineation of the intended correction. (3) Early postoperative intermediate condition. (4) Clinical end-result.

7. *Believe It or Not in Urology*—Wirt B. Dakin, M.D., 802 Pacific Mutual Building, Los Angeles.

This is a collection of rare cases, selected from a large group of urologic reports, of almost unbelievable nature, and of exceptional interest to all medical men. These reports include cases of strange pathologic conditions and anomalies; unique findings and results in surgery; rare etiologic and curative factors. Several cases are beautifully illustrated with large drawings by the nationally known surgical artist,

Bill Didusch of Baltimore. European urologists have commenced collecting similar material. Negotiations are now under way to include these.

8. *Anatomy, Etiology, and Treatment of Inguinal Hernia*—Leigh F. Watson, M. D., 727 West Seventh Street, Los Angeles.

Illustrated by charts and original drawings. The general acceptance of the congenital origin of non-traumatic indirect inguinal hernia has drawn attention to the importance of the sac as the principal cause of the hernia. The changes that are developing in the treatment of inguinal hernia. The technique of the injection and operative treatment.

9. *Treatment of Scabies Individually or En Masse*—Commander Roger A. Nolan, United States Naval Hospital, San Diego.

10. *San Diego Health Department Exhibit*—Alex Lesem, M. D., 739 Fourth Avenue, San Diego.

Exhibit of charts and working models of apparatus for prevention of water contamination.

11. *Photographic Display of Causes and Results of Automobile Accidents*—C. D. Gunn, M. D., R. J. Pickard, M. D., and F. E. Toomey, M. D., San Diego.

12. *Exhibit of Pathological Material from the United States Naval Hospital*—Doctor Adamkiewics, United States Naval Hospital, San Diego.

IV—ENTERTAINMENT

Tuesday, May 26

Past president's breakfast, 7:30 a. m., dining room.

State and County Society officers' luncheon, 12:30 p. m., dining room.

Tuesday afternoon has been set aside to permit members to engage in such recreation as they prefer. Golf, visit to the Exposition, tennis, visit to the Navy Hospital and naval vessels, sight-seeing trips, sailing and fishing, are some of the forms of diversion and recreation.

Golf.—The state golf tournament will be held on Tuesday afternoon at the Coronado Country Club, which is within a few minutes' ride of the hotel, upon the island.

There will be five silver loving cups, which will be presented to those who are lucky enough to win the different events as scheduled. The green fee will be \$1, which all members will pay, with the exception of those belonging to the Coronado Country Club. There

will be also a fifty-cent entry fee, which will be used as a sweepstake prize.

The players will be divided into three groups, with no handicap above 24. The first group will include all those with handicaps from 1 to 12, inclusive; the second group, from 13 to 18, inclusive; and the last group, from 19 to 24, inclusive.

The tournament will be an eighteen hole medal play. Players will be able to enter at the tee.

Dinner to President Robert A. Peers.—Tuesday evening, 7:15 p. m. (Tickets may be secured at the registration desk by members not registered at the Hotel Del Coronado.) Important: Because of the large registration, it will be important to obtain dinner tickets *before Tuesday noon*.

Entertainment in the ballroom, 8:30 to 9:30 p. m.

Reception and dancing in the ballroom, 9:30 to 1 a. m.



The main dining room, Hotel Del Coronado, which has a view of Glorietta and San Diego bays, the city of San Diego, and the mountains in the background.



MRS. THOMAS J. CLARK
President, Woman's Auxiliary to the
California Medical Association
1935-1936



MRS. C. KELLY CANELO
Secretary, Woman's Auxiliary to the
California Medical Association
1935-1936

V—WOMAN'S AUXILIARY

Seventh Annual Session

WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION

Headquarters at the Hotel Del Coronado, Coronado, California

Mrs. Thomas J. Clark, President
Mrs. Elliott G. Colby, Convention Chairman

Sunday, May 24

Arrival of delegates, members, and guests, greeted by delegation hostesses.

3:00-5:00 p.m.—Registration in Sun Porch.

7:30-9:30 p.m.—Registration.

Monday, May 25

8:45 a.m.—Pre-convention State Board meeting in the Coronado Yacht Club House.

9:00 a.m. to 4:00 p.m.—Registration.

10:00 a.m.—Open session of the California Medical Association. All Auxiliary members and doctors' wives are invited to attend.

12:30 p.m.—Friendship luncheon in the hotel dining room, with local hostesses presiding at each table.

2:00 p.m.—Motor trip to interesting points around San Diego, or boat trip on San Diego Bay.

9:00 p.m.—Reception and musicale in honor of Mrs. Robert A. Peers. Members of the State Board will serve on the Reception Committee.

Tuesday, May 26

9:00 a.m. to 1:00 p.m.—Registration.

9:30 a.m.—First general session of the seventh annual convention at the Yacht Club House, Mrs. Thomas J. Clark presiding.

1:30 p.m.—Trip to the Pacific International Exposition, San Diego.

3:00-4:30 p.m.—Informal tea, given by the Women's Committee of the Exposition at the House of Hospitality. Past presidents of the Woman's Auxiliary to the California Medical Association will be guests of honor.

7:15 p.m.—President's dinner and dance of the California Medical Association at Hotel Del Coronado.

Wednesday, May 27

9:00-10:00 a.m.—Registration.

9:30 a.m.—Second general session of the seventh annual convention at the Yacht Club House, Mrs. Thomas J. Clark presiding; election of officers, presentation of the membership trophy.

12:00-1:00 p.m.—Registration.

12:30 p.m.—Post-convention State Board meeting, Mrs. Andrew J. Thornton presiding.

1:30 p.m.—Al fresco luncheon at the Coronado Beach and Tennis Club, honoring Mrs. Thomas J. Clark and Mrs. Andrew J. Thornton, with Mrs. Philip Schuyler Doane presiding. Members of the State Advisory Council will be honor guests.

8:00 p.m.—Informal bridge at Hotel Del Coronado.

Thursday, May 28

Hostesses will be at the hotel all day to assist with information and plans.

WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION

COMMITTEES

Registration and Credentials

Mrs. Chester O. Tanner, Chairman
 Mrs. Hiram D. Newton, Vice-Chairman
 Mrs. David E. Froelich Mrs. David R. Higbee
 Mrs. W. M. Alberty Mrs. F. J. Ratty
 Mrs. A. E. Banks Mrs. Paul Wedgewood

Supplies and Printing

Mrs. Willard H. Newman, Chairman
 Mrs. E. H. Christopherson, Vice-Chairman
 Mrs. J. G. Wetherill Mrs. J. Terrell Scott
 Mrs. John F. Luten

Transportation and Sightseeing

Mrs. H. S. Sumerlin, Chairman
 Mrs. J. G. Wetherill, Vice-Chairman
 Mrs. L. C. Kinney Mrs. James F. Churchill

Publicity

Mrs. F. J. Lindemulder, Chairman
 Mrs. J. D. MacPherson, Vice-Chairman
 Mrs. Elmer Belt Mrs. H. P. Newman
 Mrs. Hervey King Graham Mrs. Loyd Thompson

Information

Mrs. Alex M. Lesem, Chairman
 Mrs. Alfred J. Cooper, Vice-Chairman
 Mrs. W. W. Crawford Mrs. W. H. Newman

Decorations and Flowers

Mrs. E. H. Crabtree, Chairman
 Mrs. C. L. Stealy, Vice-Chairman
 Mrs. Charles Watkins Brown Mrs. Winston Crabtree
 Mrs. L. A. Kennell Mrs. E. Minton Fetter
 Mrs. H. D. Cornell Mrs. Victor Lindsay
 Mrs. Elma Crabtree Mrs. Clarence E. Rees

Headquarters

Mrs. Carl F. Birkenstock, Chairman
 Mrs. R. O. Taylor, Vice-Chairman
 Mrs. F. J. Dingeman Mrs. F. E. Miller
 Mrs. R. O. Logsdon Mrs. E. H. Ruediger
 Mrs. B. E. McGovern Mrs. Wesley Smith

Finance

Mrs. H. A. Thompson, Chairman
 Mrs. M. C. Harding, Vice-Chairman
 Mrs. A. E. Banks Mrs. Ralph Kaysen
 Mrs. Emil C. Black Mrs. Andrew J. Thornton

Hostesses

Mrs. Charles E. Howard, Chairman
 Mrs. Emil C. Black, Vice-Chairman
 Mrs. H. F. Andrews Mrs. Ralph Kaysen
 Mrs. J. A. Brown Mrs. Otto Marsh
 Mrs. F. A. Burton Mrs. S. J. McClelland
 Mrs. G. M. Cunningham Mrs. W. D. Rolph
 Mrs. Ben F. Eager Mrs. Frank B. Schroeder
 Mrs. M. B. Graybill Mrs. R. H. Sundberg
 Mrs. C. M. Hosmer Mrs. Andrew J. Thornton
 Mrs. Charles R. Knox Mrs. T. S. Whitelock, Sr.
 Mrs. W. H. Halsey Mrs. J. C. Elliott King

Ushers and Pages

Mrs. Ben F. Eager, Chairman
 Mrs. T. S. Whitelock, Jr., Vice-Chairman
 Mrs. Damon S. Corbin Mrs. R. H. Sundberg
 Mrs. O. S. Harbaugh Mrs. R. L. Worthington
 Mrs. James A. May Mrs. F. P. O'Hara
 Mrs. J. D. MacPherson Mrs. Joseph J. O'Hara

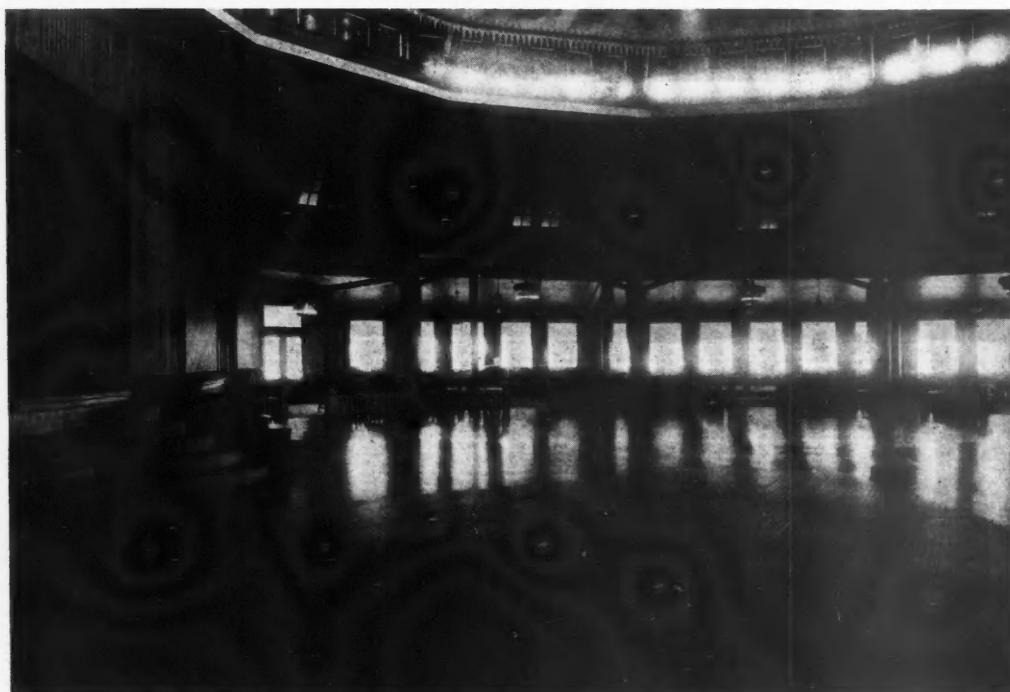
Entertainment

Mrs. Charles W. Rees, Chairman
 Mrs. H. G. Holder, Vice-Chairman
 Mrs. W. M. Alberty, Chairman of Reception
 Mrs. J. B. O'Neill, Chairman of the Exposition
 Tea for the Women's Committee
 Mrs. Frank Carter, Chairman of the Exposition
 Tea for the Auxiliary

Mrs. H. C. Jorgenson, Luncheon Chairman
 Mrs. J. B. Beardsley Mrs. W. C. Cooke
 Mrs. Emil C. Black Mrs. C. M. Hosmer
 Mrs. Charles William Brown Mrs. Otto Marsh
 Mrs. J. F. Blodgett Mrs. H. G. Merrill
 Mrs. Lloyd Myers Mrs. E. Emerson Bond
 Mrs. R. H. Sundberg Mrs. Hervey King Graham
 Mrs. F. J. Ratty Mrs. George L. Kilgore
 Mrs. W. W. Belford Mrs. R. M. Ledford
 Mrs. John C. Schlappi Mrs. Stephen Parowski
 Mrs. J. A. Brown

Emergency and Aides to General Chairman

Mrs. F. C. Russell, Chairman
 Mrs. F. E. Toomey, Vice-Chairman
 Mrs. C. V. Bernardini Mrs. Stephen Parowski
 Mrs. J. A. Brown Mrs. Paul Wedgewood
 Mrs. O. W. Cole Mrs. John W. Wilhoit
 Mrs. W. B. McGee Mrs. F. J. Walter
 Mrs. J. C. E. Nielson Mrs. A. F. Willier
 Mrs. J. G. Omelvena Mrs. E. N. Young
 Mrs. W. J. Ryan



A portion of the ballroom of Hotel Del Coronado, which will be used for general meetings of the convention.



Hotel Del Coronado, at Coronado Beach, California, where the 1936 Convention of the California Medical Association will be held.

SAN DIEGO—OUR CONVENTION CITY

Need one write about San Diego? Here came the Spanish discoverer to behold the Pacific Coast. Here was the first town, the first irrigation system, the first cultivated fields, the first school, the first mission in this "Plymouth of the West."

Discovery and settlement was a Spanish sequel to the conquests of Mexico. It was only fifty years after Columbus discovered America, that the navigator, Cabrillo, found this land-locked harbor, later named San Diego Bay. American succession came in 1846. Since that date history records an ever expanding development that produced the present city and environment with natural and acquired resources.

Lest we fall into the rut worn out by many Chambers of Commerce, suffice it to state: San Diego, with its modern business section and streets, hotels, theaters, and parks, extends to the members of the California Medical Association a very hospitable welcome.

* * *

Hotel Del Coronado.—Hotel Del Coronado, at Coronado, California, has for many years been one of the most famous resorts on the Pacific Coast. It has echoed romance in California for more than forty years, welcoming battle fleets, entertaining presidents, princes, international delegations, and dispensing hospitality to society.

An ideal place for a convention is this hostelry, because of its many rooms, one of the finest ballrooms

in the world, a high-vaulted dining room, famous for its beauty, which will seat eight hundred persons, private dining rooms for small gatherings, and various other rooms that may be used for committee meetings, make this an ideal gathering place.

The hotel occupies some four acres and is built around a patio containing many semitropical plants and flowers. It stands between the beautiful Pacific and picturesque Glorietta Bay—on a little peninsula, down which one may drive along the Silver Strand to Mexico. The hotel and the little town of Coronado are separated from San Diego by San Diego Bay, across which the stately ferries transport both cars and passengers every ten minutes.

Equipped throughout with the most adequate and efficient automatic sprinkler system, the hotel is absolutely fireproof. It may be reached by motor, airplane, steamship or railroad lines. And, having arrived at the famous resort, one finds all sorts of things to do—golf, tennis, swimming, aquaplaning, sailing, fishing, and horseback riding, being among the favorite sports. Indoor pastimes include bridge, dancing, billiards, backgammon, pingpong, and talking pictures, of which four are shown each week.

Motoring is another delight of the resort, as roads are perfect and there are many historic places within an hour's drive from the hotel, while for the lover of nature the back country drives are delightful.

Comfort and luxury within, beauty and splendor without, await the visitor at Hotel Del Coronado.

VI—SECTION MEETINGS

Scientific Section Programs

(Numbers in parenthesis after each section indicate sequence reference numbers of papers read in each section.)

I.—General Medicine (1-20).....	315
II.—General Surgery (21-42).....	317
III.—Obstetrics and Gynecology (43-51).....	319
IV.—Eye, Ear, Nose and Throat (52-63)....	320
V.—Anesthesiology (64-69).....	321
VI.—Dermatology and Syphilology (70-82).....	322
VII.—Industrial Medicine and Surgery (83-92).....	323
VIII.—Neuropsychiatry (93-104).....	324
IX.—Pathology and Bacteriology (105-117).....	325
X.—Pediatrics (118-128).....	326
XI.—Radiology (129-136).....	327
XII.—Urology (137-148).....	328

Rules Regarding Papers and Discussions at the Annual State Session:

Upon recommendation of the Executive Committee, the following rules regarding papers have been adopted by the Council:

1. All papers read before a section of an annual session are the property of CALIFORNIA AND WESTERN MEDICINE.
2. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.

3. The maximum time permitted any individual to discuss a paper is four minutes. This also applies to the author in closing his discussion. No speaker may discuss more than once any one subject. The presiding officer of each section is expected to enforce these rules.
4. A copy of each and every paper presented at the state meeting must be in the hands of the chairman or secretary of the section, or in the hands of the general secretary before the paper is presented.

Each paper must be typewritten in double space. Single space and carbon copies are not acceptable.

5. All papers read at an annual session of the California Medical Association automatically become the property of the Association (By-Laws, Chapter VI, Section 4). The Committee on Publications of the official publication, CALIFORNIA AND WESTERN MEDICINE, decides whether or not the paper submitted is of such nature as to be published in full in CALIFORNIA AND WESTERN MEDICINE or in abstract form. (In case the latter procedure is followed, the expense of setting up the type for reprints may be borne by the Association). It is also the ruling when any section has a larger number of papers on its program than can be covered in a two-day session, that not more than the average number of papers from such section shall be printed, unless for special reasons. Manuscripts not accepted for CALIFORNIA AND WESTERN MEDICINE will be returned to the authors, for submission to other medical journals, if so desired.

6. Articles are accepted for place on the program on condition that they are also contributed solely to CALIFORNIA AND WESTERN MEDICINE. Authors desiring to publish their papers elsewhere than in the journal must make written request to the editor. Papers submitted at meetings of this Association must not have been previously submitted or printed elsewhere.

7. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.

8. Papers shall not be "read by title." Papers should be original typewritten copies, double spaced, and should be handed to the section secretary after having been read.

9. No member may present more than one paper at any annual session, provided that a member may be a collaborator on more than one paper, if these papers are presented by different authors.

10. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Executive Committee his inability to fulfill his obligations.

Numbering of Section Papers

For convenience in reference, papers are numbered in serial sequence for the entire session, instead of a separate sequence for each section.

Business Meetings of Sections

Time of business meetings and elections of officers of sections will be scheduled on section blackboards by section secretaries, and through preliminary announcements by section chairmen.

Unless otherwise announced, the business meeting of each section and the election of officers will be held immediately after the reading of the second paper on the second day's section program.

I

GENERAL MEDICINE SECTION*

FLETCHER B. TAYLOR, M. D., *Chairman*
400 Twenty-Ninth Street, Oakland

JOHN C. RUDDOCK, M. D., *Secretary*
1930 Wilshire Boulevard, Los Angeles

First Meeting—Ballroom

Monday, May 25, 2 p. m.

1. *Calcinosis, with Special Reference to Its Occurrence in Scleroderma*—Campbell P. Howard, M. D., 1487 Mackay Street, Montreal, Quebec. (By invitation.)

2. *Bromide Intoxication*—George C. Burns, M. D., 7878 Seville Avenue, Huntington Park.

A historical review of the subject, the mechanism of intoxication, a description of the symptoms together with differential diagnosis. An analysis of twenty cases with suggestions as to treatment.

Discussion by Clinton H. Thienes, M. D., Los Angeles; George S. Johnson, M. D., San Francisco.

3. *The Present Status of Tuberculin as a Diagnostic Factor in the Control of Tuberculosis*—Everett Morris, M. D., Wish-i-ah Sanatorium, Auberry.

This paper calls attention to what seems to be a well-established fact, that the incidence of tuberculosis is largely due to "slowly progressive household epidemics"; that the incidence of tuberculosis may be determined by the tuberculin test, and that the control of this contagion is the prerogative of the household's family physician.

Discussion by Gladys P. Shahovitch, M. D., Los Angeles; Harold G. Trimble, M. D., Oakland.

4. *Arthritis—A Medical Problem*—Robert Stewart Peers, M. D., 2939 Summit Street, Oakland.

Points in medical treatment of the rheumatic syndrome, with mention of grouping for treatment, analgesics, sedimentation tests, carbohydrate metabolism, and laboratory studies. Paper based on over five hundred cases.

Discussion by Robert T. Pottenger, M. D., Pasadena; Leonard B. Barnard, M. D., Oakland.

5. *The Management of Alcoholism*—Harry H. Wilson, M. D., 1919 Wilshire Boulevard, Los Angeles.

The paper is based upon the thought that alcohol is only a substitute in the seeking of relief by a maladjusted personality; a routine procedure has been applied consisting of a biochemical phase wherein the patient's sense of well-being is improved and a psychological phase wherein an abbreviated psycho-analytical readjustment is attempted.

Discussion by V. H. Podstata, M. D., San Francisco; Edward W. Twitchell, M. D., San Francisco.



Second Meeting—Ballroom

Tuesday, May 26, 8:30 a. m.

6. *Radioscopy of the Heart*—Francis J. Rochex, M. D., 350 Post Street, San Francisco.

The use of the roentgen ray in the diagnosis of diseases of the heart and great vessels is described. The value of the teleoroentgenographic examination is contrasted with that of orthodiagraphy and fluoroscopy. Standard criteria for determining normal heart size are dis-

* Robert B. Hope, M. D., Los Angeles, and George C. Burns, M. D., Huntington Park, are monitors for the General Medicine Section.

cussed. It is pointed out that radioscapy has a place in the study of the cardiac patient and that it is most valuable when both the advantages and limitations of the procedure are well understood.

Discussion by William J. Kerr, M. D., San Francisco; Howard E. Ruggles, M. D., San Francisco.

7. *Present Status of Physical Examination of the Heart*—J. Guy Van Scoyoc, M. D., 510 West Sixth Street, Los Angeles.

It is the intention of this paper to discuss in a brief way the place the physical examination of the heart now occupies, reviewing some of the abnormalities that can be diagnosed by this procedure.

Discussion by William H. Leake, M. D., Los Angeles; John J. Sampson, M. D., San Francisco.

8. *Chairman's Address*—The Chairman, Fletcher B. Taylor, M. D., 400 Twenty-ninth Street, Oakland, will introduce the invited speaker, Chauncey D. Leake, Ph.D., University of California Medical School, San Francisco, whose subject will be *Practica Medici Moderni*.

Pharmacologic examples of science versus art in medicine. Analogy to ethics and etiquette. Professional relationships and the function of friendship. The general practitioner and the specialist. Public and professional ideals of preventive medicine. Suggestions regarding the effective practice of preventive medicine.

9. *Social and Medical Aspects of Chronic Arthritis and Rheumatic Diseases*—David H. Kling, M. D., 1930 Wilshire Boulevard, Los Angeles.

A survey shows the inadequacy of hospitalization and its effect on the care and conception of arthritis and rheumatic conditions. Lack of extensive knowledge of the anatomy and physiology of joints is pointed out. Studies are presented showing the value of systematic examination of joint structure and joint fluids for diagnosis and treatment.

Discussion by D. Schuyler Pulford, M. D., Sacramento; David Ghrist, M. D., Los Angeles.

10. *The Tuberculous Cavity in Its Clinical and Public Health Aspects*—Francis M. Pottenger, M. D., Pottenger Sanitarium, Monrovia.

Cavity is a most important feature of tuberculosis from both the standpoint of spreading the disease within the patient's own body and transmitting the disease to others. Cavity also furnishes the greatest problem in successful therapy. The necessity for physicians who advise tuberculous patients to understand these important features.

Discussion by Chesley Bush, M. D., Oakland; Carl R. Howson, M. D., Los Angeles.

*

Third Meeting—Ballroom

Wednesday, May 27, 8:30 a. m.

11. *Medical Aspects of Esophageal Disturbances*—Fred H. Kruse, M. D., 384 Post Street, San Francisco.

Brief classification of lesions with chief characteristics of obstruction as against dysphagia. Remote effects of obstructive lesions of the esophagus. Dysphagia as a presenting symptom, its significance and importance of diagnostic analysis. "Digestive" disturbances referred to esophagus. Some special consideration of dysphagia and "indigestion" in respect to anemia, peptic esophagitis, and hiatus hernia.

Discussion by H. Brodie Stephens, M. D., San Francisco; M. Felix Cunha, M. D., San Francisco; Harry N. Akesson, M. D., Alameda.

12. *Expert Medical Testimony in California Courts*—Harold D. Barnard, M. D., 2417 South Hope Street, Los Angeles.

This paper calls attention to the difficulties and uncertainties associated with use of medical expert testimony. Reviews the efforts of certain doctors and lawyers in the State of California over a period of approximately thirty years to correct the abuses and absurdities which have been made possible by certain rules governing court procedure. Suggest definite plans of correction, and pleads for a better understanding and more general use of Section 1871, Code of Civil Procedure of the State of California.

Discussion by Mr. Oscar C. Mueller, Los Angeles (by invitation); Andrew S. Lobingier, M. D., Los Angeles; William L. Weber, M. D., Los Angeles.

13. *Basal Metabolism—A Determination of Zero Point*—John Martin Askey, M. D., 1930 Wilshire Boulevard, Los Angeles.

A measure of the central tendency of the metabolism of normal persons (the zero point) is necessary for the evaluation of the normal range of basal metabolic rates. This zero point apparently varies somewhat with different climates, different population, and different techniques. The zero point of a particular standard cannot be used as the zero point of a particular population and laboratory without an experimental check. The mean basal metabolism of 110 normal individuals, based on one-day tests, was determined to act as a standard for comparison clinically. Two- to three-day tests on patients are impractical.

Discussion by Clarence G. Toland, M. D., Los Angeles; H. Clare Shepardson, M. D., San Francisco.

14. *Evaluation of Methods for the Study of Peripheral Vascular Disturbances*—Albert H. Elliott, M. D., Cottage Hospital, Santa Barbara.

Tests for the study of peripheral vascular disturbances may be divided into two groups: (1) Those which give information as to the degree and extent of structural changes; and (2) Those which aim to evaluate the degree of functional change and to measure the capacity of the circulatory reserve. Their technique and indications will be discussed and illustrated by case reports and lantern slides.

Discussion by P. A. Gray, M. D., Santa Barbara; William J. Kerr, M. D., San Francisco.

15. *The Clinical Manifestations of a Dengue-like Fever Recently Observed in the San Francisco Bay District*—Garnett Cheney, M. D., 210 Post Street, San Francisco.

Review of a group of twenty cases observed during the summers of 1934 and 1935, which were characterized by high fever of a weeks' duration, marked prostration and aching, and absence of leukocytosis. Description of common symptoms, including jaundice. Similarity to dengue fever.

Discussion by Edward B. Shaw, M. D., San Francisco; Donald D. Lum, M. D., Alameda.

RECESS

Election of officers and business meeting.

*

Fourth Meeting—Ballroom

Wednesday, May 27, 2 p. m.

SYMPOSIUM ON NON-TUBERCULOUS LESIONS OF THE CHEST

This will be a joint meeting of the following sections: Medicine, Surgery, and Radiology.

16. *Tumors and Cysts of the Lungs, Diagnosis, and Treatment*—J. J. Singer, M. D., 519 University Club Building, St. Louis, Missouri. (By invitation.)

17. *Silicosis*—Philip H. Pierson, M.D., 490 Post Street, San Francisco.

The danger of silicosis in industry is based upon (1) the amount and size of dust particles, namely, concentration; (2) complete chemical and petrographic analysis of dust; and (3) occupational history, physical examination, and proper x-ray examination of the chest.

If these factors are carried out in estimating the hazard of an industry, as well as observing and determining the liability factor in industrial cases, much of the so-called "racket" in silicosis would be avoided.

18. *Pulmonary Embolism*—E. Richmond Ware, M.D., 1930 Wilshire Boulevard, Los Angeles, and Lewis T. Bullock, M.D., 1136 West Sixth Street, Los Angeles.

The frequency of pulmonary embolism, with especial emphasis on its occurrence in medical as well as postoperative patients, is indicated. The clinical picture, differential diagnosis, with accessory laboratory diagnostic aids, is described. Finally, possible factors of etiology, means of prevention and treatment, are discussed.

19. *Intra- and Extrathoracic Problems in the Bronchiectatic Patient*—Frank S. Dolley, M.D., 427 South Arden Boulevard, Los Angeles.

The prognosis in limited and extensive involvement under medical and surgical care. Consideration of frequent complications that may be anticipated in a patient with bronchiectasis who (1) develops an apparent pneumonia; (2) develops an upper respiratory infection; (3) develops lung abscess symptoms; (4) extrathoracic surgery.

20. *Pulmonary Abscess and Gangrene*—Charles Weiss, M.D., 2200 Post Street, San Francisco.

This paper will review the present knowledge of the etiology, bacteriology, and pathogenesis of pulmonary abscess. It will include a summary of original investigations which have been conducted at the Mount Zion Hospital on the transmission of the disease to monkeys and dogs by the bronchial route.

Discussion of symposium by L. H. Garland, M.D., San Francisco; Munford Smith, M.D., Los Angeles; Roy E. Thomas, M.D., Los Angeles; Harold Brunn, M.D., San Francisco.



II

GENERAL SURGERY SECTION*

WAYLAND A. MORRISON, M.D., *Chairman*
1037 Pacific Mutual Building

523 West Sixth Street, Los Angeles

H. GLENN BELL, M.D., *Secretary*
University of California Hospital, San Francisco

J. M. SCHMOELE, M.D., *Assistant Secretary*
407 Wilshire Medical Building
1930 Wilshire Boulevard, Los Angeles

First Meeting—Crown Dining Room

Monday, May 25, 2 p. m.

21. *Clinical Consequences of Abnormal Rotation and Fusion of the Right Colon*—LeRoy Brooks, M.D., 2000 Van Ness Avenue, San Francisco.

This discussion will briefly cover the clinical consequences of abnormal rotation and failure

of normal fusion of the right colon. A brief report on some seventy-odd personal cases will be given. The technique of the surgical treatment will be illustrated and the results of our follow-up will be given.

22. *Congenital Anomalies Associated with Intestinal Obstruction*—George H. Ernsberger, M.D., 276 West College Street, Covina.

The various types are discussed in detail as to anatomy, physiology, and pathology, with reference to the literature and the author's personal experience.

Eight cases are briefly presented, illustrating certain types of these anomalies. The anatomical and physiologic findings along with the symptoms are stressed rather than other less pertinent details. Lantern slides will be presented to demonstrate more clearly the verbal descriptions.

23. *Congenital Occlusion of the Intestinal Tract*—J. Homer Woolsey, M.D., Woodland Clinic, Woodland.

A paper upon the incidence, embryology, etiology, symptomatology, and treatment of this condition together with a report of a successfully operated baby who had an occlusion of the duodenum. (Lantern slides.)

Discussion of the above papers by E. Eric Larson, M.D., Los Angeles; G. D. Delprat, Jr., M.D., San Francisco; Walter A. Bayley, M.D., Los Angeles; W. T. Conley, M.D., Los Angeles; John B. deC. M. Saunders, M.B., San Francisco.

24. *New Approach to Resection of the Colonic Flexures*—Carl L. Hoag, M.D., 702 Fitzhugh Building, 384 Post Street, San Francisco.

A new pericostal-abdominal incision gives adequate exposure of the ascending and descending colon and their flexures, complete control of blood supply, access to lymphatics. It is shorter, safer, and does not weaken the abdominal wall. Indications, technique, case reports. (Lantern slides.)

Discussion by Foster K. Collins, M.D., Los Angeles; H. Glenn Bell, M.D., San Francisco.

25. *Acute Appendicitis: One Thousand Consecutive Cases*—George K. Rhodes, M.D., 430 Medico-Dental Building, 490 Post Street, San Francisco.

The paper will include modern conceptions of the surgical treatment of acute appendicitis (a study based on a personal review of one thousand consecutive cases operated on at the San Francisco Hospital). The pertinent facts of this review are given, such as those bearing on the types and time of operations, drainage, etc. The dangers of reviving delayed treatment, as expounded in the recent literature, will be stressed.

Discussion by Charles T. Sturgeon, M.D., Los Angeles; Edwin M. Taylor, M.D., Oakland.

26. *The Surgical Approach to Hypertension*—Francis M. Findlay, M.D., 1515 State Street, Santa Barbara.

Essential hypertension is defined: the etiology is still unknown. The known physiologic and pathologic changes present in the different stages of hypertension are reviewed briefly. The clinical and experimental evidence of the adrenal influence is reviewed and shown to have only a minor rôle in the production of hypertension. The operative procedures reported to date upon the sympathetic nervous system are reviewed and evaluated.

Discussion by Howard C. Naffziger, M.D., San Francisco; Carl W. Rand, M.D., Los Angeles.

* Nelson J. Howard, M.D., San Francisco, and Robert Austin, M.D., Coronado, are monitors for the General Surgery Section.

Second Meeting—Crown Dining Room**Tuesday, May 26, 8:30 a. m.**

27. *Chairman's Address*—Wayland A. Morrison, M. D., 523 West Sixth Street, Los Angeles.

28. *Positive-Negative Pressure Therapy in the Treatment of Peripheral Vascular Disorders*—M. L. Montgomery, M. D., University of California Medical School, San Francisco.

In thirty-six patients treated by gradual pressure changes (Herman-Reid), the results were excellent in cases of early acute occlusion of the femoral artery; they ranged from good to fair in claudication of the calf, good to poor in diabetics with arteriosclerosis, but were discouraging in older patients having advanced arteriosclerosis, with or without ulcers of the feet.

Discussion by John M. Schmoele, M. D., Los Angeles; William J. Kerr, M. D., San Francisco.

29. *Preoperative and Postoperative Care in the Prevention of Thrombosis and Embolism*—John H. Breyer, M. D., 701 Professional Building, 65 North Madison Avenue, Pasadena.

The object of the paper is not to contribute anything that I have particularly gained from personal experience, but to review the literature and work done on the subject and crystallize out in a practical application of the various observations made. It is most embarrassing to any surgeon to be confronted in an apparently normal case with a complication of thrombosis and embolism.

Discussion by E. Vincent Askey, M. D., Los Angeles; Harold Brunn, M. D., San Francisco.

RECESS**Election of officers and business meeting.**

30. *Reconstruction of the Breast*—Howard L. Updegraff, M. D., 601 Hollywood First National Bank Building, Hollywood.

Amputation of the hypertrophied breast is often done when a less mutilating procedure would suffice. A technique allowing the complete removal of the breast content, in addition to a return to normal size, is available. The surgery is done in two stages.

Discussion by William S. Kiskadden, M. D., Los Angeles; Harry M. Blackfield, M. D., San Francisco.

31. *Cardiospasm*—H. Brodie Stephens, M. D., Fitzhugh Building, 384 Post Street, San Francisco.

The present-day conception of the causes of the condition generally known as cardiospasm will be reviewed in this article. A brief account of the principal symptoms will be presented, followed by an analysis of the follow-up studies that have been gathered from the literature and our own cases. The follow-up study will chiefly concern the results obtained with the use of the hydrostatic dilators. It is hoped that one or two operative cases can be reported.

Discussion by Joseph J. O'Hara, M. D., San Diego; Stacy R. Mettier, M. D., San Francisco; John Hunt Shephard, M. D., San Jose.

**Third Meeting—Crown Dining Room****Wednesday, May 27, 8:30 a. m.**

32. *Duodenal Fistulae*—Theodore C. Lawson, M. D., 3115 Webster Street, Oakland.

The incidence, causative pathology, symptomatology of duodenal fistulae are discussed and their treatment comprehensively taken up. Several non-operative and operative methods of cure are compared and the ones most successful are gone into in detail. Case histories are given in which different methods were used, the reasons these variations were made, and the results obtained.

Discussion by Charles M. Fox, M. D., San Diego; Nelson J. Howard, M. D., San Francisco.

33. *The Surgical Management of Obstructive Jaundice*—Frederick S. Foote, M. D., 490 Post Street, San Francisco.

A critical analysis of the results obtained from operation on seventy-five patients at the San Francisco Hospital (1929-1936): 1. Diagnosis: (a) Stone, carcinoma, hepatitis. (b) Type of pain, age and duration and depth of jaundice. (c) Van den Bergh; Takata-ara; and Rose Bengal. (d) Percentage of error. (e) X-ray.

2. Operative results: (a) Cures. (b) Operative deaths: Shock, peritonitis, hemorrhage, liver death.

3. Reasons for mortality: (a) Wrong diagnosis. (b) Wrong time to operate. (c) Magnitude of operation. (d) Pre- and postoperative care. (e) Duration and depth of jaundice. (f) Age. (g) Altered coagulation.

4. Summary.

5. Conclusions.

Discussion by Thomas O. Burger, M. D., San Diego; Theodore L. Althausen, M. D., San Francisco.

34. *Internal Derangement of the Temporomandibular Joint*—Thomas F. Mullen, M. D., 450 Sutter Street, San Francisco.

The temporomandibular joint is a complicated structure which is liable to functional disorders. Changes in the meniscus and its relations to the movements of the condyle give rise to a series of disabilities comparable to those caused by derangement of the semilunar cartilages in the knee-joint. These are discussed in three groups.

Discussion by E. F. Tholen, M. D., Los Angeles; George C. Hensel, M. D., San Francisco.

35. *Prevention of Postoperative Distention—Gas Pains*—Louis E. Mahoney, M. D., 501 Professional Building, Santa Monica.

Gas pains are a most distressing postoperative complication. Proper preparation of the patient and extremely gentle operative manipulations are important.

Ordinary postoperative treatment and usual dietary regimen predispose to gas formation. Hospital liquid diet is semi-starvation and causes proliferation of putrefactive and gas-forming bacteria. Avoid liquid diet and give water and solid food at once. Give mineral oil and avoid enemata.

Result: Good appetite, no gas pains, bowel movement on the third day, very little loss of weight, and earlier return to work.

Discussion by C. J. Berne, M. D., Los Angeles; Fred H. Kruse, M. D., San Francisco.

36. *Surgical Relief of Stomach Ulcers*—Charles E. Phillips, M. D., 1919 Wilshire Boulevard, Los Angeles.

Etiologic factors in stomach ulcers. Uncomplicated gastric ulcers become a surgical problem only after careful study, and adequate medical treatment has been considered. Indications for surgery: Absolute, relative. Contraindications.

The surgical objective is to remove pathology and restore the normal continuity of the gastrointestinal tract. Technique: Gastroduodenal excision with restoration of the continuity of the tract. The cost of efficiency in gastro-intestinal surgery. Should gastro-intestinal surgery be a specialty?

Discussion by E. Clarence Moore, M. D., Los Angeles; Asa W. Collins, M. D., San Francisco.

**Fourth Meeting—Ballroom****Wednesday, May 27, 2 p. m.****SYMPOSIUM ON NONTUBERCULOUS LESIONS OF THE CHEST**

This will be a joint meeting of the following sections: Medicine, Surgery, and Radiology.

The program of this joint meeting is printed under the Fourth Meeting of the General Medicine Section. (See page 316.)

Fifth Meeting—Crown Dining Room**Thursday, May 28, 8:30 a. m.**

37. *Pancreatic Surgery*—George Thomason, M. D., 317 Hollingsworth Building, 606 South Hill Street, Los Angeles.

The development of the feature of hyperinsulinism and hypoglycemia, associated usually with an adenoma of the pancreas, and the marvelously successful results which have been obtained in these cases make the subject of great interest. The advisability of removing a considerable part of the pancreas in cases of hyperinsulinism and hypoglycemia when no tumor is present should be considered.

Discussion by Walter Bayley, M. D., Los Angeles; H. Clare Shepardson, M. D., San Francisco.

38. *Pseudorecurrences of Biliary Duct Stones*—Harry K. Bonn, M. D., 607 South Olive Street, Los Angeles.

A discussion of: (a) The incidence of duct stones. (b) The surgical anatomy of the common duct, especially the many vascular anomalies related thereto. (c) The possibilities for vicious hemorrhage and duct injury. (d) Surgical measures of safety. (e) Mortality: Of cholecystectomy alone and of cholecystectomy plus choledochotomy.

Discussion by H. E. Schiffbauer, M. D., Los Angeles; Stanley H. Mentzer, M. D., San Francisco.

39. *Closed Method of Drainage of a Subphrenic Abscess*—H. E. Schiffbauer, M. D., 1005 Brockman Building, 520 West Seventh Street, Los Angeles.

Subphrenic abscess is nearly always the result of some purulent intraperitoneal inflammatory condition, the most frequent cause being that of a ruptured, gangrenous appendix. The operative mortality still remains high. This, in my opinion, could be reduced by the use of the closed drainage method in selected cases, which technique will be fully described.

Discussion by Verne C. Hunt, M. D., Los Angeles; Sumner Everingham, M. D., Oakland.

40. *The Experimental Basis for the Injection Treatment of Hernia*—Alfred S. White, M. D., 685 Fifteenth Avenue, San Francisco.

A brief review of the history of the injection method. A study of the reaction of tissues in experimental animals to the various solutions used in the clinical treatment by the injection method. Laboratory data to establish the safety and rationale of this procedure in human beings.

41. *The Injection Treatment of Hernia*—Franklin I. Harris, M. D., 450 Sutter Street, San Francisco.

The mechanism of inguinal hernia is reviewed. The application of experimental findings to clinical use and the principle of continuous reduction of the hernia by means of a truss are described. The indications, dangers and complications are discussed. A practical technique is described and a summary of experience with 150 cases is given.

42. *Clinical Results of the Injection Treatment of Hernia*—Frank R. Girard, M. D., 951 Medico-Dental Building, 490 Post Street, San Francisco.

Variations in technique are described. The use of various solutions is discussed. The result of a study of 150 cases is presented and compared with the results by the operative method. The value of an ambulatory method in the treatment of hernia in industrial surgery is emphasized.

Discussion of the above three papers by Clyde J. Osborne, M. D., San Diego; Clark L. Abbott, M. D., Oakland; Walter B. Coffey, M. D., San Francisco; Harold Brunn, M. D., San Francisco.

III**OBSTETRICS AND GYNECOLOGY SECTION***

H. A. STEPHENSON, M. D., *Chairman*
521 Medico-Dental Building, 490 Post Street
San Francisco

DONALD G. TOLLEFSON, M. D., *Vice-Chairman*
511 South Bonnie Brae, Los Angeles

R. GLENN CRAIG, M. D., *Secretary*
1450 Medico-Dental Building, 490 Post Street
San Francisco

First Meeting—Casino**Monday, May 25, 2 p. m.**

43. *Obstetrical Analgesia—The Use of Pantopon and Scopolamin as an Adjunct to Sodium Amytal and Paraldehyd—With Observations Upon the Management of the New-born*—Joseph M. Harris, M. D., and Benjamin F. Feingold, M. D., 3875 Wilshire Boulevard, Los Angeles; A. J. Wineland, M. D., 338 South St. Andrews Place, Los Angeles; and J. Harold Cantarow, M. D., Hartford, Conn.

Concerning a method of analgesia giving 100 per cent results. Showing favorable results upon the mother and particularly the baby. The value of an intentionally induced apnea, or so-called asphyxia of the baby. Studies upon the urinary and pathologic findings of the new-born with relation to analgesia.

44. *Gynecologic Symptoms Complicating Acute Anterior Poliomyelitis*—Dwight D. Young, M. D., 918 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

In a recent survey made of one hundred female patients who have had acute anterior poliomyelitis, it was found that all show disturbances of menstruation. Dysmenorrhea is the most frequent and the most distressing symptom encountered. The survey was made among the employees of the Los Angeles County General Hospital. Over 90 per cent of this group complained of dysmenorrhea, which began soon after the onset of poliomyelitis.

45. *Missed Abortion*—J. Morris Slemons, M. D., 819 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

An infrequent, puzzling complication; on the increase perhaps, because of the attention given prenatal care and the liberal use of sedatives when abortion threatens. Anatomical studies teach that death of the embryo precedes placental disintegration. The characteristic inertia of the uterus is attributed to hormonal imbalance; excessive progestin, deficient estrin.

46. *Menorrhagia: Results of Treatment, a Follow-Up Study*—Margaret Schulze, M. D., University of California Hospital, San Francisco.

Two hundred and fifty cases of essential menorrhagia, ranging in age from fourteen to sixty years, were followed from two to twenty years. Treatment was varied, but the majority received radium in varying dosage. Influence upon the menorrhagia, future pregnancies, weight changes, menopausal symptoms, and other sequelae, are considered.

47. *Traumatic Rupture of Uterus in Advanced Pregnancy*—E. M. Lazard, M. D., 1930 Wilshire Boulevard, Los Angeles.

This paper reports a case of complete traumatic rupture of the uterus in the ninth month of pregnancy. Ruptures through cesarean or myomectomy scars and those occurring as a result of obstructed labor or operative attempts at delivery or abortion are not considered. The literature is reviewed and reports of forty-one cases found. The mechanics of the accident and the operative treatments are discussed.

* Thomas Wier, M. D., San Diego, and Hans Schluter, M. D., Sacramento, are monitors for the Obstetrics and Gynecology Section.

Second Meeting—Casino

Wednesday, May 27, 2 p. m.

48. *Chairman's Address: Better Obstetrics*—H. A. Stephenson, M. D., 490 Post Street, San Francisco.
The subject will be dealt with under the following headings: 1. Present mortality rates. 2. Factors concerned in these. 3. Factors looking toward better obstetrics. (a) Education of laity. (b) Hospital facilities. (c) Prenatal care. (d) Teaching of obstetrics in medical schools. (e) Postgraduate training. (f) Specialization in obstetrics.
49. *A Report on the Late Toxemias of Pregnancy*—James V. Campbell, M. D., 2923 Webster Street, Oakland.
A critical review is made of 168 patients showing definite evidence of late toxemia of pregnancy. The report is drawn from 4,979 patients over six months pregnant who were cared for and delivered in private practice. A possible etiologic factor is discussed.
50. *Plastic Surgery of the Pelvic Floor and Adjacent Viscera*—Albert V. Pettit, M. D., 2000 Van Ness Avenue, San Francisco.
1. The anatomical and physiologic factors concerning the normal mechanism of pelvic visceral support. 2. Physical factors involved in maintaining the position and mobility of the uterus. 3. Pudendal hernia. 4. Operations: (a) Suspension of the uterus; suspension of vagina and cervix after total and subtotal hysterectomy. (b) Plastic operations on the cervix uteri. (c) Anterior colporrhaphy for cystocele. (d) Perineorrhaphy. (e) Enterocoele.
51. *The Differential Diagnosis of Ectopic Gestation by Peritoneoscopy*—Robert B. Hope, M. D., 1930 Wilshire Boulevard, Los Angeles.
A short history of peritoneoscopy is given, difficulties encountered in diagnosis of ectopic gestation discussed. Technique of peritoneoscopy as applied to ectopic gestation is described and the common findings discussed. Abstracted case histories are included to show the problems encountered and the solution of them by this method.

RECESS

Election of officers and business meeting.



IV

EYE, EAR, NOSE, AND THROAT SECTION*

HAROLD A. FLETCHER, M. D., *Chairman*
1440 Medico-Dental Building, 490 Post Street
San Francisco

FRANK S. BAXTER, M. D., *Vice-Chairman*
Franklin Building, 1624 Franklin Street
Oakland

DEAN E. GODWIN, M. D., *Secretary*
820 Professional Building, 117 East Eighth Street
Long Beach

First Meeting—Patio Dining Room

Tuesday, May 26, 8:30 a. m.

52. *The Use of Sulphur Dioxid in the Treatment of the Epidemic Cold*—A. G. Rawlins, M. D., 614 Fitzhugh Building, 384 Post Street, San Francisco.
Filterable virus theory in etiology of epidemic cold. Differential diagnosis between epidemic colds, flare-ups of chronic sinusitis, etc.
Use of polarized light in diagnosing filterable virus imperfection in plants, and possible application to human diseases.

* Frank S. Baxter, M. D., is monitor for the Eye, Ear, Nose and Throat Section.

Use of sulphur dioxid in treatment of epidemic cold due to filterable virus. Results of patients treated with sulphur dioxid.

Discussion by John MacKenzie Brown, M. D., Los Angeles.

53. *Sinusitis of Dental Origin*—Andrew A. Love, M. D., 305 Medical Office Building, 1136 West Sixth Street, Los Angeles.

Sinus disease in general is considered and the problem of sinusitis of dental origin. The treatment by the otolaryngologist is reviewed and the management by the dental surgeon with particular emphasis on the eventuality of an oro-antral fistula after tooth extraction. Slides are shown demonstrating the different methods of closing these fistulae surgically.

Discussion by Herman Semenov, M. D., Los Angeles.

54. *Rhinophyma: The Etiology, Pathology, and Treatment*—Winston C. Crabtree, M. D., 307 Medico-Dental Building, 233 A Street, San Diego.

This study includes a brief discourse on etiology and pathology. Cases are presented with unusual features.

Adequate surgical treatment is usually a fairly simple procedure. Skin grafts are deemed unnecessary. X-ray and radium therapy are useful adjuncts to the surgical treatment. Complete coöperation between dermatologist and rhinologist is advocated for the proper handling of this condition.

Discussion by Frederick G. Novy, Jr., M. D., Oakland.

55. *Observations on Patients in Air-Conditioned Hospital Rooms*—Matthew N. Hosmer, M. D., 620 Fitzhugh Building, 384 Post Street, San Francisco.

Air-conditioned rooms are now an important part of the equipment of a modern hospital. Each room should be conditioned by a separate unit, so that any desired condition can be maintained in any room.

A brief résumé is given of the results obtained in patients suffering from acute and chronic sinusitis, hay fever, asthma, etc., in the air-conditioned rooms in St. Luke's Hospital in San Francisco.

Discussion by Robert R. Montgomery, M. D., Long Beach.



Second Meeting—Patio Dining Room

Wednesday, May 27, 8:30 a. m.

56. *X-Ray in Otolaryngology*—Orrie E. Ghrist, M. D., 143 North Brand Avenue, Glendale.

History and physical properties of x-rays. Positions essential for the rhinologist to know in interpreting x-ray films and reports. How x-rays are affected by edema, exudates, hyperatrophies, cysts, and new growths. When and what type of bony changes to expect. The relative value of x-rays in diagnosis of sinusitis.

Discussion by S. von Christerson, M. D., San Francisco.

57. *A Newer Technique of Radium Application in Carcinoma of the Bronchus*—Joel J. Pressman, M. D., 1917 Wilshire Boulevard, Los Angeles.

This paper describes a technique of the application of massive doses of radium to the bronchus for primary carcinoma. The advantages of combining this with pneumothorax are included. Slides will be shown demonstrating the technique. There will be a brief résumé of interesting gross and microscopic pathologic specimens also illustrated with slides.

Discussion by Simon Jesberg, M. D., Los Angeles.

58. *Practical Quantitative Perimetry*—David O. Harrington, M. D., Fitzhugh Building, 384 Post Street, San Francisco.

The term "quantitative perimetry" is defined. Reasons for its absolute necessity as a routine

office procedure are outlined and illustrative fields are shown. A very simple and inexpensive equipment is described and the desirability of a standard in equipment, charts, and nomenclature is emphasized. Finally, a relatively simple and rapid procedure of field-taking is outlined, practical for office use.

Discussion by George L. Kilgore, M. D., San Diego.

59. *The Significance of Scleral Ectasis in Advanced Glaucoma*—M. N. Beigelman, M. D., 203 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

Peculiarities of scleral structure explain the localization and the type of scleral ectasis produced by consistently increased intra-ocular pressure. The anatomical changes preceding the accompanying scleral staphyloma in advanced glaucoma are illustrated by gross specimens and microscopic sections. Scleral distention, which has an important bearing upon ocular tension, can be produced intentionally in selected cases of absolute glaucoma.

Discussion by William A. Boyce, M. D., Los Angeles.

RECESS

Election of officers and business meeting.



Third Meeting—Patio Dining Room

Thursday, May 28, 8:30 a. m.

60. *Treatment of Acute Iritis*—Frank H. Rodin, M. D., 505 Medico-Dental Building, 490 Post Street, San Francisco.

Acute iritis is an emergency and calls for immediate treatment. No case may be considered under control unless all synechias are broken down and the pupil is dilated to its maximum.

The "sheet-anchor" of the treatment is atropin. In case this is insufficient, epinephrin bitartrate should be used or subconjunctival injections of atropin and adrenalin. Nonspecific protein therapy is of great value. Typhoid-paratyphoid vaccine and milk injections are considered.

Discussion by Alfred R. Robbins, M. D., Los Angeles.

61. *The O'Connor Cinch Shortening Operation—Technique*—Samuel A. Durr, M. D., 1304 Medico-Dental Building, 233 A Street, San Diego.

It is probable that this operation has not been generally adopted, only because the essentials of its technique have not been generally understood.

The technique is discussed, mentioning essential instruments and appliances, with emphasis upon clean dissection, hemostasis, and minimizing trauma to tissue.

Discussion by A. Ray Irvine, M. D., Los Angeles.

62. *Ocular Treatment with Diathermy and Short Wave*—Clifford B. Walker, M. D., 410 Auditorium Building, 427 West Fifth Street, Los Angeles.

While it is difficult to prove that any effect other than heat production results from diathermic, long or short wave, applications to the eye, yet the possibility that other effects may exist seems worth consideration.

A variety of electrodes and the method of application of these for treatment to the eye are described.

An attempt is made to indicate the types or group of cases that may be expected to respond to this treatment.

Discussion by Roderic P. O'Connor, M. D., Oakland.

63. *Treatment of Squint*—Melverton E. Trainor, M. D., 924 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

The history of strabismus operations is considered. The four recognized courses are out-

lined. The aims to be attained by treatment are analyzed. The author's procedure is: (1) The prescribing of full strength correction based on thorough cycloplegic refraction. (2) Operation—complete detachment of both internal recti at their insertion, with detachment of the fascia if necessary.

Discussion by Dennis V. Smith, M. D., Long Beach.



V

ANESTHESIOLOGY SECTION

WILLIAM V. CHALMERS-FRANCIS, M. D., *Chairman*
1061 Le Clair Place, Los Angeles

HARRY J. SMITH, M. D., *Secretary*
3115 Webster Street, Oakland

First Meeting—Grill Room

Wednesday, May 27, 2 p. m.

64. *The Advantages of Sodium Evipal Intravenous Anesthesia*—Henry Verrill Findlay, M. D., 1515 State Street, Santa Barbara.

This paper is based upon personal experience on over 150 cases. It briefly reviews the history of intravenous anesthesia and summarizes the reported experience with evipal, one of the newer barbiturates. The experimental evidence pointing to the safety of the drug is stressed. The dangers and contraindications; a brief review of the technique of administration; the rapid recovery and absence of postoperative nausea are emphasized. The rapidity of elimination and the effect upon the blood sugar in diabetics is illustrated by slides.

65. *The Detoxification of Procain*—John G. Dunlop, M. D., 111 N. Normandie Avenue, Los Angeles.

A report of experiments conducted to determine the site and rate of destruction and elimination of procain hydrochlorid by dogs.

66. *Obstetrical Anesthesia*—La Verne Wright, M. D., 3856 California Street, San Francisco.

Agents used at present for analgesia in the first and second stages of labor, their effects on mother and child and safe anesthesia in the third stage.



Second Meeting—Casino

Thursday, May 28, 8:30 a. m.

67. *Chairman's Address*—William V. Chalmers-Francis, M. D., 1061 Le Clair Place, Los Angeles.

68. *Peridural Anesthesia*—Ida Heissig, M. D., 1100 Mission Road, Los Angeles.

Definition—An extradural nerve block of a region, and similar to a spinal but without its dangers.

Technique: (1) Lying on side, head and knees flexed. Insertion of needle in lumbar interspaces to epidural space—50 cubic centimeters of 2 per cent novocain injected. (2) Patient in sitting position and insertion of spinal needle in thoracic region.

Premedication: Same as for spinal. Advantages: No shock, no interference with the functions of any viscera, no paralyses of legs which alarm patients.

Contraindications: Patients hypersensitive to novocain. Conclusion: A form of regional anesthesia which should be a part of the armamentarium of a good anesthetist.

69. *Premedication for Surgery*—James C. Doyle, M. D., 1930 Wilshire Boulevard, Los Angeles.

History of—for children. Medications in frequent use. Pharmacology and therapeutics. For gas and general anesthetics. For subarachnoid and block type of anesthesia. For avertin and evipal.

RECESS

Election of officers and business meeting.

VI
DERMATOLOGY AND SYPHILOLOGY
SECTION*

WILLIAM H. GOECKERMAN, M. D., *Chairman*
1216 Roosevelt Building, 727 West Seventh Street
Los Angeles

NORMAN N. EPSTEIN, M. D., *Vice-Chairman*
450 Sutter Street, San Francisco

STANLEY O. CHAMBERS, M. D., *Secretary*
826 Roosevelt Building, 727 West Seventh Street
Los Angeles

First Meeting—Vestibule A

Monday, May 25, 2 p. m.

70. *Scleroderma*—E. D. Lovejoy, M. D., 812 Brockman Building, Los Angeles, and Ervin Epstein, M. D., 1200 State Street, Los Angeles. (By invitation.)

A complete review of the literature emphasizing etiology, treatment, histopathology, laboratory evidence, and differential diagnosis is presented. Clinical and microphotographs accompany the presentation with detailed graphs to emphasize the compounded conclusions of various authors.

Discussion by Steele F. Stewart, M. D., Los Angeles; G. Y. Rusk, M. D., San Francisco.

71. *Skin Lesions of Tuberculosis as Imitators of Other Skin Lesions*—H. C. L. Lindsay, M. D., 1680 North Vine Street, Hollywood.

The similarity of tuberculous skin lesions to counterparts due to other infections and diseases of the skin exists. Granulomata, verrucae and ulcerative lesions of tuberculosis are occasionally difficult to differentiate from their leprous, frambesiform or syphilitic counterparts. Psoriasiform, acneiform, and rosaceaform nodular lupus vulgaris closely resemble psoriasis, acne vulgaris and acne rosacea, respectively. Hematogenous tuberculous lesions may resemble other blood-borne infections on the skin. Differential diagnosis and treatment is briefly touched upon.

Discussion by Howard Morrow, M. D., San Francisco.

72. *Smallpox Vaccine in the Treatment of Recurrent Herpes Simplex*—Paul D. Foster, M. D., 2007 Wilshire Boulevard, Los Angeles, and Alton B. Absheir, M. D., New York. (By invitation.)

The treatment of herpes simplex recurrent has always been a source of embarrassment to physicians. Patients always feel that a recurrence of any condition is the fault of the physician. However, when the etiology of a condition is not known, the treatment is usually unsatisfactory.

We are presenting a treatment which has been used in Europe for several years, but has had little publicity in America. The recurrent herpes simplex cases when vaccinated with ordinary smallpox vaccine show a shortened period of activity for that particular attack and definite immunization to further attacks. Thirty-four cases are presented with four recurrences after two years.

Discussion by Howard Morrow, M. D., San Francisco.

73. *Rosacea-like Tuberculid of Lewandowsky*—Saul S. Robinson, M. D., 1101 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

The patient is a female, aged 25, who complains of an eruption on her face of six months'

duration. The cheeks and the chin are especially involved. The clinical findings are discrete papules of apply-jelly color, with some interspersed pustules on an erythematous base. The histopathologic findings confirm the diagnosis of this case. A survey of the literature, photographs, photomicrographs, tissue sections (H and E and Zeehl-Neelsen stains), routine blood and urine examinations, tuberculin tests, and chest x-ray, have been done for a complete study of this condition.

Discussion by Marvin S. Harris, M. D., Los Angeles; A. Herman Zeiler, M. D., Los Angeles.

74. *Treatment of Cutaneous Malignancies*—Harry P. Jacobson, M. D., 2007 Wilshire Boulevard, Los Angeles.

Successful treatment of cutaneous cancer depends upon early diagnosis. Regardless of what method of therapy one employs—radiation, cold-knife surgery, electrosurgery, or actual cautery—the task must be performed with thoroughness and fearlessness. The actual cautery offers the cancer victim the best chance. Hemorrhage is minimal, and the extent of operation easily controlled.

Discussion by James F. Percy, Los Angeles; A. Herman Zeiler, M. D., Los Angeles.

75. *Scabidical Drugs—Experimental Study*—H. J. Templeton, M. D., and H. V. Allington, M. D., 3115 Webster Street, Oakland.

An attempt has been made in our work to evaluate the scabidical action of some of the newer and older drugs used in the treatment of scabies.

This has been done by carefully removing the living acari from their burrows, imbedding them in various scabidical ointments and observing them at regular intervals until no signs of life remained, as judged by cessation of motion of their extremities or viscera.

Discussion by Hiram Miller, M. D., San Francisco; George V. Kulchar, M. D., San Francisco.

RECESS

Election of officers and business meeting.



Second Meeting—Vestibule A

Tuesday, May 26, 8:30 a. m.

76. *Chairman's Address: Some Thoughts on the Future of Dermatology*—William H. Goeckerman, M. D., 1216 Roosevelt Building, Los Angeles.

Specialism in medicine will continue much as in other activities in life. Dermatology, to fill a public want, must shape itself in the proper manner. The pure morphologist has seen his day. The modern dermatologist must be a physician first and a specialist only second. If he achieves this status he will fill a medical need for generations to come.

77. *Cutaneous Manifestations of Xanthomatosis*—Stanley C. Anderson, M. D., Veterans' Administration Hospital, Los Angeles.

The writer discusses cutaneous manifestations of xanthomatosis with relation to other forms of xanthomatosis. A patient with extensive cutaneous involvement has been studied. This case offers an opportunity for review of the subject together with recent concepts of associated lipid metabolism.

Discussion by Phillip E. Rothman, M. D., Los Angeles; Howard Morrow, M. D., San Francisco.

* C. Ray Lounsberry, M. D., San Diego, and Phillip K. Allen, M. D., San Diego, will act as monitors for the Dermatology and Syphilology Section.

78. *Hyperpyrexia as an Adjunct in the Treatment of Cerebrospinal and Kahn-Fast Syphilis*—James E. Potter, M. D. (by invitation), Bremerton, Washington; Francis H. Redewill, M. D., 686 Flood Building, San Francisco; and E. G. Longley, M. D., Bremerton, Washington. (By invitation.)

A review of current literature, physiology of the skin with special reference to its reaction in air-conditioned and non-air-conditioned cabinets, hyperpyrexia created by electro-magnetic induction, discussion of heat-resistant patients. Comparison of results obtained from the use of three types of cabinets. Comparison of results obtained when patients were treated with hyperpyrexia alone and when treated with other routine medication, and its application and feasibility as an office procedure. Review of results obtained in 150 cases.

Discussion by Eugene S. Kilgore, M. D., San Francisco; F. S. Dillingham, M. D., Los Angeles; A. G. Folte, M. D., San Francisco; Charles G. Foote, M. D., San Diego.

79. *Eplulis Granulomatosa*—Samuel Ayres, Jr., M. D., and Nelson Paul Anderson, M. D., 2007 Wilshire Boulevard, Los Angeles.

Clinical photographs and histologic sections are presented to illustrate an unusual lesion of the gums, which is to be differentiated from carcinoma. The lesion is associated with dental sepsis, is benign, and in the case presented here-with disappeared following exposure to x-ray and radium.

Discussion by Emil Tholen, M. D., Los Angeles; H. J. Templeton, M. D., Oakland.

80. *Myeloid Leukemia with Extensive Ulcerations of the Skin*—Charles R. Caskey, M. D., 1930 Wilshire Boulevard, Los Angeles.

History of case is presented with early lesions simulating factitia. A pathologic diagnosis of carcinoma was made. Later lesions resembled mycosis fungoides, "d'émblée" type. A diagnosis of syphilis was also entertained. Pathologists of international reputation agree on diagnosis of myeloid leukemia from autopsy material. Pathologic reports by George Maner, M. D., Los Angeles, autopsy findings; Stuart C. Way, M. D., San Francisco, and Lee McCarthy, M. D., histopathologic findings.

Discussion by Moses Scholtz, M. D., Los Angeles; L. Dale Huffman, M. D., Los Angeles.

81. *The Therapeutic Effects of Mapharsen in Syphilis*—Norman N. Epstein, M. D., 450 Sutter Street, San Francisco.

Mapharsen, better known as arsenoxid, is believed to be the most effective therapeutic product in the breaking down of the arsphenamins within the body. A summary of the therapeutic effects obtained with this drug in a series of patients treated at the University of California during the past two years is reported.

Discussion by Chauncey D. Leake, Ph.D., San Francisco; Ernest H. Falconer, M. D., San Francisco.

82. *Leukoplakia*—Arne E. Ingels, M.D., Medico-Dental Building, 490 Post Street, San Francisco.

A résumé will include a brief survey of the literature, including present-day conceptions. Etiology of the disease, particularly chemical and mechanical factors and predisposing factors like disease (syphilis) and age and hygienic conditions, will be dealt with. Different modes of treatment—surgery, electrodesiccation, radium, and x-ray. Slides and clinical photographs for purpose of the differential diagnosis are presented.

Discussion by P. K. Gilman, M. D., San Francisco; Loren R. Chandler, M. D., San Francisco; Orville Meland, M. D., Los Angeles.

VII

INDUSTRIAL MEDICINE AND SURGERY SECTION*

J. MINTON MEHERIN, M. D., *Chairman*
507 Union Square Building, 350 Post Street
San Francisco

FREDERIC C. BOST, M. D., *Secretary*
Fitzhugh Building, 384 Post Street
San Francisco

First Meeting—Casino

Tuesday, May 26, 8:30 a. m.

83. *The Diagnostic Value of Pneumoradiography of the Knee*—Paul A. Quaintance, M. D., 2007 Wilshire Boulevard, Los Angeles.

A review of the literature with a description of the author's technique and a report of fifty cases. Pneumoradiography is evaluated as a diagnostic and differentiating aid in semilunar cartilage injuries and other derangements of the knee.

Discussion by Samuel S. Mathews, M. D., Los Angeles.

84. *Salt Water Pool Treatment of Osteomyelitis and Suppurative Joints*—A. Brockway, M. D., 3523 West Twelfth Street, Los Angeles.

Early motion in pus-ridden joints is imperative. The salt pool is ideal for such treatment because it permits motion without pain, the solution is antiseptic and because of its hypertonicity causes an outflow of lymph and pus from the innermost depths of the wound.

Discussion by Francis M. McKeever, M. D., Los Angeles.

85. *Important Anatomical and Functional Features of the Distal Radio-Ulnar Joint*—John B. de C. M. Saunders, M. B., University of California Medical School, San Francisco. (By invitation.)

The morphologic features of the distal radio-ulnar joint, its ligamentous support and other anatomical structures will be discussed. The functional anatomy of this joint will be considered as part of a unit consisting of elbow, radio-ulnar, wrist and intercarpal movement, and it will be pointed out how derangements which occur following trauma in the region of the wrist establish dysfunction in the motions of the arm.

86. *Injuries to the Distal Radio-Ulnar Joint*—LeRoy C. Abbott, M. D., Fitzhugh Building, 384 Post Street, San Francisco.

Injuries to the distal radio-ulnar joint occur with greater frequency than commonly recognized. Minor or major disability may follow this injury. Recognition of the disturbance makes possible the application of treatment which may yield an excellent functional result. The prophylactic and reparative treatment is discerned.

Discussion by Maynard C. Harding, M. D., San Diego.

87. *Surgical Fractures of the Mandible*—George C. Hensel, M. D., 2000 Van Ness Avenue, San Francisco.

Fractures of the mandible are classified in three groups according to demands of treatment. Anatomical and physiologic requirements of function of the mandible are emphasized as the determining factors in the choice of treatment. Fractures falling into either definite or possible surgical groups are discussed from the standpoint of diagnosis and surgical treatment.

Discussion by H. Waldo Spiers, M. D., Los Angeles.

RECESS

Election of officers and business meeting.

* Richard B. McGovney, M. D., Santa Barbara, and Fraser L. Macpherson, M. D., San Diego, are monitors for the Industrial Medicine and Surgery Section.

Second Meeting—Casino

Wednesday, May 27, 8:30 a. m.

88. *The Clinical and Industrial Aspects of Silicosis Pncumoconiosis*—Harold M. F. Behneman, M.D., Fitzhugh Building, 384 Post Street, San Francisco.

The clinical picture of silicosis is given and a summary of the industrial legislation throughout the United States concerning this condition is presented.

89. *The Problem of the Peripheral Artery in Industrial Practice*—Felix L. Pearl, M.D., 450 Sutter Street, San Francisco.

A discussion of the rôle of underlying peripheral arterial disease in the management of the industrial patient. The paper also considers traumatic lesions of the arteries.

Discussion by Vernon P. Thompson, M.D., Los Angeles.

90. *Pedicle Flap Patterns for Hand Reconstruction*—Gerald Brown O'Connor, M.D., Medico-Dental Building, 490 Post Street, San Francisco.

A consideration of the types and varieties of soft tissue coverage needed for volar and dorsal hand repair as well as for digital reconstruction. Description of various pedicle flap patterns used in hand reconstruction with a discussion of the selection of flap patterns; methods of obtaining them; their application, management, and result in functional hand reconstruction.

Discussion by William S. Kiskadden, M.D., Los Angeles.

91. *Rupture of the Nucleus Pulposus—The Importance of Making a Diagnosis*—Ottiwel W. Jones, Jr., M.D., University of California Medical School, San Francisco.

The signs and symptoms of the dislocated nucleus pulposus are enumerated and emphasized. The differential diagnosis is discussed and surgically proved. Cases are presented.

Discussion by Richard T. Taylor, M.D., Los Angeles.

92. *Immediate Versus Delayed Primary Tendon Repair*—Martin W. Debenham, M.D., 2712 Union Street, San Francisco, and Walter D. Birnbaum, M.D., Medico-Dental Building, 490 Post Street, San Francisco.

The literature concerning this much debated question has been reviewed and the authors present clinical and experimental data to support their own conclusions.

Discussion by Fraser L. Macpherson, M.D., San Diego.



VIII

NEUROPSYCHIATRY SECTION*

SYDNEY KINNEAR SMITH, M.D., *Chairman*
230 Grand Avenue, Oakland

J. M. NIELSEN, M.D., *Secretary*
1253 Roosevelt Building, 727 West Seventh Street
Los Angeles

First Meeting—Grill Room

Monday, May 25, 2 p. m.

93. *Chairman's Address: Where Psychotics Come From*—Sydney Kinnear Smith, M.D., 230 Grand Avenue, Oakland.

This paper embodies an attempt to analyze the family background of one hundred psychotic individuals. The psychotic group employed is chosen without reference to type of case, including the majority of disorders, as

listed in the classification of the American Psychiatric Association.

The family backgrounds are considered from the point of view of nationality, religion, social status, intellectual status, emotional stability, presence of psychoses, psychoneuroses, etc.

94. *Present Status of Undergraduate and Graduate Psychiatric Education in America*—Franklin G. Ebaugh, M.D., University of Colorado, 4200 East Ninth Street, Denver, Colorado. (By invitation.)

95. *Psychosis in the Mentally Defective*—Fred O. Butler, M.D., Sonoma State Home, Eldridge.

A survey of the various types of psychoses found among the mentally defective patients in California's largest hospital for the feeble-minded is presented, with comments on their relative frequencies, their similarities to and variations from those found among the general population as regards symptomatology, diagnosis, and prognosis. The lack of mental development alters considerably the course of the psychosis in these patients.

Discussion by Margaret H. Smyth, M.D., Stockton.

96. *Fallacious Trends in Psychiatry*—William Edler, M.D., 595 East Colorado Street, Pasadena.

Research work in psychiatry is handicapped by the trend to metaphysics and occultism. A dysfunctioning brain should be viewed analogously to disease of any other viscus. The so-called functional psychoses are of unknown etiology, and this should be admitted by the medical profession. Instead, there has developed within the profession bizarre cultism that closely resembles fakery and charlatanism.

Discussion by Fred O. Butler, M.D., Eldridge.



Second Meeting—Grill Room

Tuesday, May 26, 8:30 a. m.

97. *Development of Myelitis During Course of Intramuscular Injections of Rabies Vaccine*—F. G. Lindemulder, M.D., 2001 Fourth Avenue, San Diego.

The author presents a brief review of the literature on complications following injections of rabies vaccine, and the number of patients receiving vaccines from various pharmaceutical houses, with no sequelae. A case is presented in which myelitis developed during a course of intramuscular injections of rabies vaccine and reference is made to the signs and symptoms as they developed. A possible explanation is offered of the cause of the central nervous system involvement.

Discussion by Samuel D. Ingham, M.D., Los Angeles; Charles Schroeder, D. V. M., San Diego. (By invitation.)

98. *The Clinical Significance of Lumbar Radiculitis and of Neuritis of the Femoral Nerve*—John B. Doyle, M.D., 1930 Wilshire Boulevard, Los Angeles.

From time to time clinical pictures of progressive involvement of the roots of the lumbar nerves and of neuritis of the femoral nerve are encountered. When caudal and spinal diseases have been excluded, it may be safely assumed that the etiologic factor is tumor or glandular enlargement. Illustrative cases are presented.

Discussion by Carl W. Rand, M.D., Los Angeles; Walter F. Schaller, M.D., San Francisco.

99. *The Cardiovascular, Respiratory, and Metabolic Rate Responses of the Body to Fever Therapy*—Helen Hopkins, M.D., 3875 Wilshire Boulevard, Los Angeles.

Blood pressure, heart rate, respiratory function and metabolic rate determinations have

* Delbert H. Werden, M.D., San Diego, and F. G. Lindemulder, M.D., San Diego, will act as monitors for the Neuropsychiatry Section.

been made in patients undergoing fever therapy in an attempt to correlate these responses with the clinical changes which make their appearance.

Discussion by J. S. Hibben, M. D., Pasadena.

100. *Primary Lateral Sclerosis—A Clinical and Pathologic Study*—Mervyn H. Hirschfeld, M. D., 450 Sutter Street, San Francisco.

Case history and pathologic report demonstrating a clinical entity, the existence of which is doubted by many modern authorities. A male, age 43, suffered a spastic paralysis beginning in the right leg and ascending to include the cranial motor nerves. At no time were there any symptoms indicating involvement of other tracts or anterior horn cells. The pathology was limited to the pyramidal system. Atrophy of the motor cortex, lysis of Betz cells, and sclerosis of the pyramidal tracts, are shown by pictures and slides.

Discussion by Walter F. Schaller, M. D., San Francisco; Samuel D. Ingham, M. D., Los Angeles.

✽

Third Meeting—Grill Room

Wednesday, May 27, 8:30 a. m.

101. *Hydration as a Factor in Epilepsy—A Clinical Study*—Eugene Ziskind, M. D., 1052 West Sixth Street, Los Angeles; Esther Somerfield, M. D., and Ruth O. Bolton, B. S., 1930 Wilshire Boulevard, Los Angeles.

The authors report on original studies in which they gave seven quarts of water to each of a series of epileptic patients and succeeded in precipitating convulsions by this method in one-fourth of the number tested. An effort is made to correlate these results with changes in the blood concentration. The current conceptions of dehydration therapy in epilepsy are discussed.

Discussion by Samuel D. Ingham, M. D., Los Angeles.

102. *Interval Hemorrhages Following Trauma—A Clinical-Surgical-Pathologic Study of Twenty-Six Cases*—R. B. Raney, M. D., 727 West Seventh Street, Los Angeles.

Work is reported on interval hemorrhages encountered at the Los Angeles County Hospital over a period of twenty months. There were fourteen cases of subdural hemorrhage, six of extradural, and three mixed. All of the subdural and extradural cases were operated upon. The patients recovered in twelve of these cases. The diagnosis and treatment are discussed.

Discussion by Carl W. Rand, M. D., Los Angeles.

103. *Ischemic Softening of the Brain in Tuberculous Meningitis*—Clarence W. Olsen, M. D., White Memorial Hospital, Los Angeles, and Albert F. Brown, M. D., 1200 North State Street, Los Angeles.

Foci of cerebral softening are not infrequently noticed in material from cases of tuberculous meningitis. The associated clinical manifestations may present difficulty in diagnosis. There are considered in this paper recent cases in which cerebral softening was a striking feature.

Discussion by Cyril B. Courville, M. D., Los Angeles.

104. *The Pathogenesis of Otogenous Cerebellar Abscess*—Cyril B. Courville, M. D., White Memorial Hospital, Los Angeles, and J. M. Nielsen, M. D., 727 West Seventh Street, Los Angeles.

An otogenous abscess may be located either in the cerebrum or cerebellum, and in either situation may be "adjacent" or "distant." The pathway traveled by the infecting organism, the peculiar structure, and the anatomic rela-

tionships of the cerebellum predicate the type and location of cerebellar abscess. In this study particular attention is given to the pathways of infection. In addition to the usual route through the "death angle," infection by way of venous channels and the meningeal spaces is considered.

Discussion by Carl W. Rand, M. D., Los Angeles; R. B. Raney, M. D., Los Angeles.



IX

PATHOLOGY AND BACTERIOLOGY SECTION*

RAWSON J. PICKARD, M. D., *Chairman*
805 Watts Building, 520 E Street
San Diego

GEORGE D. MANER, M. D., *Secretary*
657 South Westlake Boulevard
Los Angeles

ZERA E. BOLIN, M. D., *Assistant Secretary*
Medico-Dental Building, 490 Post Street
San Francisco

First Meeting—Vestibule B

Monday, May 25, 2 p. m.

105. *The Thymus Gland in Health and Disease*—Paul Michael, M. D., 434 Thirtieth Street, Oakland.
This paper deals with the embryology, histology, physiology, and pathology of the thymus gland. It includes a review of experimental work on animals up to date, and also includes a statistical study of two hundred thymus glands removed at autopsy with clinical correlation.

106. *Meningo-encephalitis*—G. Y. Rusk, M. D., Mount Zion Hospital, San Francisco.

A male, aged 27, a case of Dr. Julius Sherman's, was one of a family with respiratory infection considered of influenza type. The patient was admitted to the hospital on the fifth day of illness, having become febrile, somewhat lethargic, and finally falling unconscious before admission. Death occurred about twenty-two hours later. Report of the pathologic findings, including meningo-encephalitis (virus type) is presented.

107. *Experimental and Postmortem Studies on the Dual Blood Supply of the Lungs in Various Pathologic Conditions*—Mary E. Mathes, M. D., and David A. Wood, M. D., Departments of Pathology and Surgery, Stanford University School of Medicine, San Francisco.

A study of the bronchial and pulmonary arterial changes which occur in various pathologic conditions, such as chronic inflammatory pulmonary lesions, pulmonary tuberculosis, lung tumors, congenital cysts of the lungs, and cases of right-sided heart hypertrophy. Stereoscopic x-ray films of lungs in which the bronchial arteries have been injected with bismuth oxychloride, show important characteristic changes.

108. *Pathologic Changes in Myasthenia Gravis and Muscular Dystrophies*—Charles L. Connor, M. D., University of California Medical School, San Francisco.

The paper is based on a study of two cases of myasthenia gravis and four cases of muscular dystrophies, all with autopsies.

The changes in myasthenia gravis in the muscles are fairly constant, but no other consistent features are found. Chronic thyroid disease and a persistent thymus are the only additional factors which may be present. The

* Howard A. Ball, M. D., San Diego; Alvin G. Foord, M. D., Pasadena, and Zera E. Bolin, M. D., San Francisco, will act as monitors for the Pathology Section.

muscle lesion is a degenerative phenomenon associated with the presence of groups of lymphocytes. In the muscular dystrophies of children there is also one constant finding and that is what appears to be lack of complete development of skeletal muscle. In other words, this is not so much a degeneration, but an aborted attempt to form normal muscle. The nerve changes are vague and usually not present. There appears to be no reason for the large number of clinical types of this disease which have been described. (Lantern slides.)

109. *Lipoid Pneumonia*—David A. Wood, M.D., Department of Pathology, Stanford University School of Medicine, San Francisco.

A discussion of the etiologic factors in the production of lipoid pneumonia and the anatomic changes produced thereby. Report of a case occurring in a male eighty years of age afflicted with a chronic bronchopneumonia for several years preceding his death. At autopsy the typical lesions of lipoid pneumonia.

110. *Cancer Clinics*—Zera E. Bolin, M.D., Medico-Dental Building, 490 Post Street, San Francisco.

The cancer situation in California. The California Medical Association's Cancer Commission. The need of professional education. How to make the staff of a hospital conscious of the cancer problem. Organization of a cancer committee of a hospital staff. Records and follow-up. Experience in a small hospital. The results obtained.

RECESS

Election of officers and business meeting.

✽

Second Meeting—Vestibule B

Tuesday, May 26, 8:30 a. m.

111. *Chairman's Address*—Rawson J. Pickard, M.D., 805 Watts Building, San Diego.

112. *Individual Differences in Human Blood and Their Medico-Legal Applications*—Roy W. Hammack, M.D., 657 South Westlake Avenue, Los Angeles.

Heredity of the blood groups. Theories of inheritance of the agglutinogens A and B. Bernstein's theory. The subgroups of A and group A B. The agglutinogens M and N and their heredity. Medico-legal applications. Types of cases. Proof of non-paternity. Determination of groups in blood stains. Recognition by the courts.

113. *Infectious Mononucleosis*—Round-table discussion.

- (a) *Serologic and Pathologic Aspects*—E. M. Butt, M.D., University of Southern California Medical School, Los Angeles.

Discussion as to the presence of sheep cells agglutinins and hemolysins in the blood serum of cases of infectious mononucleosis. Nature of heterophile antibodies. Description of histopathology in lymph nodes and tonsils.

- (b) *Hematologic Aspects*—Madeline Fallon, M.D., Children's Hospital, Los Angeles. (By invitation.)

Discussion of the blood picture associated with this disease, especially the morphology of the characteristic mononuclear cell. Observations and ideas as to the origin, nature and classification of the mononuclear cell. Differentiation between leukemia and other conditions from the hematologist's viewpoint. Presentation of charts and lantern slides.

- (c) *Clinical Aspects*—A. M. Hoffman, M.D., 803 Medical Office Building, Los Angeles.

Differentiation, if any, between infectious mononucleosis and glandular fever. Sporadic versus "epidemic" cases. Incidence in young adults and children. Clinical manifestations

enumerated and illustrative cases cited, demonstrating confusion in differential diagnosis and variability in course.

✽

Third Meeting—Vestibule B

Wednesday, May 27, 8:30 a. m.

114. *Histopathology of Mixed Tumors of the Parotid Gland*—J. W. Budd, M.D., St. Vincent's Hospital, Los Angeles.

Tumors occurring in the salivary gland region have long been a subject of controversy. They present a complex structure having a ground substance of myxomatous tissue, hyaline connective tissue and cartilage, and inclusions of cells similar to glands, pavement, epithelium, cornified pearls, prickly cells or with protoplasmic fibrillations.

Without attempting to offer evidence as to their histogenesis the microscopic structure of a small series of these tumors is reviewed.

115. *Allergy—Lesions Produced by Injection of Protein*—Louisa Hemken, M.D., University of Southern California Medical School, Los Angeles.

This experimental study considers the morphologic changes produced by nonspecific foreign protein. Rabbits have been given repeated intravenous injections of normal horse serum. Lesions, indicative of hyperergic inflammation, are to be demonstrated in the coronary arteries, the heart muscle, the lungs and kidneys. These lesions are similar to those occurring in periarteritis nodosa and rheumatic heart disease.

116. *Alterations in Carbohydrate Metabolism Following Hypophysectomy in Rats*—Howard A. Ball, M.D., Medico-Dental Building, 233 A Street, San Diego.

Oral administration of glucose after hypophysectomy may present a variety of responses in the blood-sugar curve. The response following subcutaneous administration is more consistent and shows a progressive change during the period of observation. Discussion includes sugar curves, liver and muscle glycogen assays and the relation of the adrenals to the effects observed.

117. *Goiters of Unusual Types*—A. G. Foord, M.D., Pasadena Hospital, Pasadena.

Clinical and pathologic reports and observations on the following types of lesions of the thyroid: (1) Hashimoto's disease. (2) Riedel's tumor. (3) Chronic thyroiditis with lipomatous infiltration. (4) Hürthle cell tumors, with discussion of the origin of the characteristic cell. Demonstration of gross material and lantern-slide presentation of histopathology.



X

PEDIATRIC SECTION*

SAM J. McCLENDON, M.D., *Chairman*
2001 Fourth Street, San Diego

EDWARD B. SHAW, M.D., *Secretary*
Fitzhugh Building, 384 Post Street
San Francisco

E. E. MOODY, M.D., *Assistant Secretary*
3780 Wilshire Boulevard, Los Angeles

First Meeting—Patio Dining Room
Monday, May 25, 2 p. m.

118. *Prevention and Treatment of Whooping-Cough*—J. M. Frawley, M.D., 615 Patterson Building, Fresno.

The etiology and diagnosis of whooping-cough are briefly discussed. The development

* Roy N. Taylor, M.D., Long Beach, and Lawrence R. Jacobus, M.D., Oakland, will act as monitors for the Pediatrics Section.

of biologic therapy is reviewed and the use of vaccine in prophylaxis and treatment is described in detail.

Discussion by A. J. Scott, Jr., Los Angeles; Guy L. Bliss, M. D., Long Beach; Francis S. Smyth, M. D., San Francisco.

119. *Theories of the Etiology of Congenital Deformities*—William S. Kiskadden, M. D., 1930 Wilshire Boulevard, Los Angeles.

Old and new theories of the etiology of congenital deformities. Consideration from a genetic, anatomic, embryologic and clinical basis, with examples including harelip and cleft palate, deformities of the hands and feet, nose, ear, penis and skeletal structures, illustrated with lantern slides.

Discussion by Oscar Reiss, M. D., Los Angeles; Howard L. Updegraff, M. D., Hollywood.

120. *Erythroblastosis Neonatorum*—William M. Happ, M. D., 3875 Wilshire Boulevard, Los Angeles. Presentation of a case and review of the literature on this subject.

Discussion by William P. Lucas, M. D., San Francisco; Harold K. Faber, M. D., San Francisco.

121. *Immunotransfusions in the Treatment of Communicable Diseases*—P. M. Hamilton, M. D., 248 East Main Street, Alhambra.

Successes and failures of whole blood and serum from immune donors in specific treatment of communicable diseases, as seen at the Los Angeles County General Hospital.

Discussion by W. S. Bowers, M. D., Los Angeles; C. M. Hyland, M. D., Los Angeles.

122. *Treatment of Bronchopneumonia in Children by Carbon Dioxid Inhalations*—Randolph G. Flood, M. D., Medico-Dental Building, 490 Post Street, San Francisco.

A series of 173 cases so treated is reported with results and routine used. The physiology of CO₂ in normal respiration is discussed and its specific action is demonstrated by slides. A clinical study of the response of various types of pneumonia is discussed as well as the complications observed in this series.

Discussion by Donald K. Woods, M. D., San Diego.

RECESS

Election of officers and business meeting.



Second Meeting—Patio Dining Room

Wednesday, May 27, 2 p. m.

123. *Chairman's Address: Some Trends of Present-Day Pediatrics*—Sam J. McClendon, M. D., 2001 Fourth Street, San Diego.

A brief summary of the present status of the control of contagious disease and of the handling of growth and development problems from an endocrine standpoint; and a prophetic glance into the future in the light of present-day investigations along these lines.

124. *Trends in Child Psychiatry*—Ernst Wolff, M. D., 450 Sutter Street, San Francisco.

The paper is based on the experiences of a study trip East in 1935. It deals with the various forms of child psychiatric organization—methods of approach to the case; diagnostic procedure; therapeutic attitudes and educational function in the community.

Discussion by Franklin G. Ebaugh, M. D., Denver, Colorado. (By invitation.)

125. *Functional Hypoglycemia Among Infants and Children—A Review, with Particular Reference to Its Recurrent Convulsive Manifestations*—John Mott Rector, M. D., 2000 Van Ness Avenue, San Francisco.

The paper is based upon a contribution of eleven cases of functional or spontaneous hypoglycemia associated with recurrent convulsions observed in children. The etiology, incidence, and general characteristics of hypoglycemia in childhood are described, together with a consideration of the diagnosis, therapy, and prognosis of this disorder.

Discussion by Francis S. Smyth, M. D., San Francisco; Hugh K. Berkley, M. D., Los Angeles.

126. *The Value of Simple Eye Tests in a Pediatrician's Office*—William Palmer Lucas, M. D., and Helen M. Johnson, M. D., 490 Post Street, San Francisco.

Mental as well as physical outlook on life depends upon eyesight. Ability to read a chart with ease may not mean that glasses are unnecessary. Physicians should, therefore, invariably supplement the screening eye tests given at school by objective and subjective examination. Suggestions for both with reports of cases.

Discussion by George Newton Hosford, M. D., San Francisco.

127. *Mesenteric Lymphadenitis and the Acute Abdomen*—Mary B. Olney, M. D., University of California Hospital, San Francisco.

A presentation of a series of cases illustrating the clinical entity recognized as mesenteric lymphadenitis with salient features, differentiation from acute appendicitis, course, treatment, and prognosis.

Discussion by H. Glenn Bell, M. D., San Francisco; Francis S. Smyth, M. D., San Francisco.

128. *Facts and Fallacies About the Feet in Young Childhood*—Edwin F. Patton, M. D., 3875 Wilshire Boulevard, Los Angeles.

An attempt to work out a classification of foot defects of the early walking age more refined than that in general usage today, and to rationalize measures of correction applicable to each specific division, with the purpose of avoiding the undertreatment and overtreatment so prevalent at present.

Discussion by Clifford B. Sweet, M. D., Oakland; Fraser L. Macpherson, M. D., San Diego.



XI

RADIOLOGY SECTION*

ALFRED C. SIEFERT, M. D., *Chairman*
411 Thirtieth Street
Oakland

WILLIAM E. COSTLOW, M. D., *Secretary*
1407 South Hope Street
Los Angeles

First Meeting—Bridge Room

Monday, May 25, 2 p. m.

SYMPOSIUM ON BONE LESIONS

129. *Chairman's Address: Meditations on the Science and Practice of Medicine, with Particular Reference to Radiology*—Alfred C. Siefert, M. D., 411 Thirtieth Street, Oakland.

My intention is to throw the "spotlight," so to speak, in brief, aphoristic style, upon some trends in modern medicine—economic, political, and philosophical—with special application to the art and science of radiology, and the radiologist as an individual. Problems will not be discussed, much less solved. The idea will be simply to arouse thought.

* John B. Eneboe, M. D., San Diego, will act as monitor for the Radiology Section.

130. *The Roentgenologic Diagnosis of Bone Tumors*—Kenneth S. Davis, M.D., 2131 Ocean View Boulevard, Los Angeles.

A résumé of the diagnostic roentgenologic findings of the various primary bone tumors.

131. *Points in the Consideration of Bone Tumors from the Clinical and Surgical Standpoint*—Hugh T. Jones, M.D., 201 Medical Office Building, 1136 West Sixth Street, Los Angeles.

To the clinician and surgeon usually comes the responsibility of the decision as to the type of treatment to be employed. He must make full use of the aid given by the roentgenologist, the pathologist, and the laboratory, but must not lose sight of the fact that the final responsibility must be his. The surgeon is concerned to know when not to do radical surgery rather than when an amputation is clearly indicated. The paper will deal particularly with certain pitfalls to avoid and indication to help to determine when surgery is not to be done.

132. *Radiation Therapy in Bone Tumors*—Orville N. Meland, M.D., 1407 South Hope Street, Los Angeles.

Radiation therapy of bone tumors has been carried out for many years and has gradually passed from the stage of empiricism. This has been due to greater accuracy of diagnosis from an x-ray standpoint, as well as the taking of biopsies which give an idea as to sensitivity. Where biopsies are not obtainable the patient may be given a radiologic therapeutic test. Some lesions may be treated by irradiation alone, others by surgery alone, while some should be given the benefit of combined treatment.

133. *Metastatic Malignancy of the Osseous Structures*—Henry Snure, M.D., California Hospital, Los Angeles, and George D. Maner, M.D., 657 South Westlake Avenue, Los Angeles.

A roentgenologic and pathologic study. Report on experimental observations. Consideration of the factors necessary for visualization of metastasis on the roentgen film. (Lantern slides.)

Discussion of symposium by Lowell S. Goin, M.D., Los Angeles; A. Ludwig Lindberg, M.D., Los Angeles; and Paul E. McMaster, M.D., Los Angeles.

RECESS

Election of officers and business meeting.



Second Meeting—Bridge Room

Wednesday, May 27, 8:30 a. m.

134. *Roentgen Pelvimetry in Four Hundred and Fifty-Three Cases of Suspected Dystocia*—Clayton R. Johnson, M.D., 602 East Beverly Boulevard, Whittier.

Roentgen pelvimetry is shown to be a practical procedure in cases of suspected dystocia. The normal findings are shown as well as the findings in practically all known types of diseased pelves. Cephalopelvic disproportion is a comparatively uncommon condition and much less frequent than suspected. (Lantern slides.)

Discussion by Wilbur Bailey, M.D., Los Angeles.

135. *Treatment of Lymphomatoid Diseases—Hodgkins and Leukemic Types*—Henry J. Ullmann, M.D., 1520 Chapala Street, Santa Barbara.

Radiation therapy only effective treatment known today. Small frequent doses with amount and frequency adapted to immediate condition of patient essential. Details of method and effects produced. Good clinical

judgment essential to proper dosage. (Lantern slides.)

Discussion by Irving S. Ingber, M.D., San Francisco.

136. *Deformities of the Ventricles in Proved Brain Tumors*—Robert S. Stone, M.D., and Fritz Schulze, M.D., University of California Hospital, San Francisco.

The deformities of the ventricles are not always exactly what one would expect from the size and position of any given tumor. Edema and swelling of the brain on the affected side causes as much of the trouble as the tumor itself. In the present paper, we have reviewed the type of deformity shown with deformity of the various regions.

Discussion by Ray A. Carter, M.D., Los Angeles.

RECESS

Meeting of Pacific Roentgen Club.



Third Meeting—Bridge Room

Wednesday, May 27, 2 p. m.

SYMPOSIUM ON NONTUBERCULOUS LESIONS OF THE CHEST

This will be a joint meeting of the following sections: Medicine, Surgery, and Radiology.

The program of this joint meeting is printed under the fourth meeting of the General Medicine Section. (See page 316.)



XII

UROLOGY SECTION*

THOMAS E. GIBSON, M.D., *Chairman*
450 Sutter Street, San Francisco

ADOLPH A. KUTZMANN, M.D., *Secretary*
1930 Wilshire Boulevard, Los Angeles

First Meeting—Bridge Room

Tuesday, May 26, 8:30 a. m.

137. *Chairman's Address: The Present Status of Renal Sympathectomy*—Thomas E. Gibson, M.D., 450 Sutter Street, San Francisco.

The anatomy and physiology of the nerves of the kidney are portrayed. An appraisal is made of the extensive literature on experimental renal denervation. The present status of renal sympathectomy is evaluated from the clinical standpoint, with indications and end-results. Sixteen personal cases are reported. (Lantern slides.)

138. *Unusual Anomalous Ureter*—Henry A. R. Kreutzmann, M.D., 2000 Van Ness Avenue, San Francisco.

Report of a case discovered postmortem in which a second ureter on the left side was found dilated with urine and containing calculi. This ureter ended in the tissues near the vagina on the left side with no apparent external orifice. A discussion of the embryology which is the probable cause of this unusual abnormality.

139. *A Few Suggestions as to Cause of Symptoms in Pyelonephritis*—W. W. Cross, M.D., 1624 Franklin Street, Oakland.

The normal tissue of the bladder, ureter and kidney pelvis, also the kidney substance. This

* E. F. Chamberlain, M.D., San Diego, and Joseph A. May, M.D., San Diego, will act as monitors for the Urology Section.

will then be followed by the normal tissues after distending them with fixing fluid.

From postmortem findings and biopsies an attempt is made to trace the changes in the tissues that follow during the course of development of pyelonephritis and evaluate the changed structure as the cause of symptoms and the alterations which give rise to the change found by the x-ray.

The majority of the slides are in natural color. Most of the sections have been stained with Mallory's Triple Stain.

140. *Pyelonephritis with "Clear Urine"*—James R. Dillon, M. D., 301 Medico-Dental Building, 490 Post Street, San Francisco.

Frequent tendency to neglect to make a more thorough examination of the urinary tract in vague septic conditions where the centrifuged urine shows no pus and no gross evidence of bacteria. Case reports, diagnosis, etiologic factors, treatment. (Lantern slides.)

141. *The Treatment of Acute and Subacute Pyelonephritis*—Robert V. Day, M. D., 1913 Wilshire Boulevard, Los Angeles.

The time-honored and orthodox, expectant and conservative treatment of acute pyelonephritis is frequently time-wasting as well as apt to accomplish nothing in the way of prevention of future attacks. Properly and accurately placed indwelling ureteral catheters of sufficient diameter, will, in a large percentage of cases, cut short the attacks and tend to prevent recurrences in many instances.

Discussion of the above papers by Lloyd R. Reynolds, M. D., San Francisco; Frank S. Dillingham, M. D., Los Angeles.

142. *Ureteral Calculi*—Dozier H. Gibbs, M. D., 1256 Roosevelt Building, 727 West Seventh Street, Los Angeles.

This paper deals with the actual management of ureteral calculi in forty-six cases seen in private patients during the past five years. Short case reports and lantern slides of illustrative and unusual cases.

Discussion by Lloyd E. Kindall, M. D., Oakland; Burnett W. Wright, M. D., Los Angeles.

RECESS

Election of officers and business meeting.

✽

Second Meeting—Bridge Room

Wednesday, May 27, 2 p. m.

143. *A Common Industrial Accident to the Urethra*—Edward W. Beach, M. D., 306 Medico-Dental Building, 1127 Eleventh Street, Sacramento.

The "straddle" injury should hold interest for the urologist who is concerned, because the urethra is frequently involved in variant degrees contingent upon the nature of the accident as well as the presence or absence of pre-existing strictures. It also concerns the industrial surgeon to whom the unfortunate first applies for relief. Last, but not least, the insurance carrier is concerned because they pay the bills.

This article treats of a series of these "straddle" injuries coming under the author's observation during the last ten years. An attempt is made therein to stress certain pertinent anatomical factors. Treatment seeks to maximum functional results with a minimum of conservative surgery and hospitalization.

Discussion by Jay J. Crane, M. D., Los Angeles; Miley B. Wesson, M. D., San Francisco.

144. *Does Transurethral Resection Require as Exacting Preparation as Prostatectomy?*—Herman C. Bumpus, M. D., and Ben D. Massey, M. D., 112 North Madison Avenue, Pasadena.

The importance of preoperative preparation in the prevention of complications following prostatectomy has been clearly demonstrated. That the usual complications following transurethral resection can be as accurately attributed to faulty preparation seems doubtful. When such complications are studied they will be found to result usually from errors of omission either during or after operation. This being the case, a less exacting preoperative preparation seems indicated when resection rather than prostatectomy is contemplated.

Discussion by H. A. R. Kreutzmann, M. D., San Francisco; J. C. Negley, M. D., Los Angeles; Albert M. Meads, M. D., Oakland.

145. *Primary Carcinoma of the Epididymis*—James A. May, M. D., 2001 Fourth Street, San Diego.

A brief summary of the few cases of primary carcinoma of the epididymis heretofore reported is given and the rarity of the condition discussed briefly. In the case studied, the findings at operation, the pathologic report of the specimen, the subsequent course of the case under deep x-ray therapy, the estimations of the hormonal content of the urine, and the autopsy findings are reported. Slides of the gross specimen and photomicrographs will be shown.

Discussion by G. Franklin Farman, M. D., Los Angeles; Thomas E. Gibson, M. D., San Francisco.

146. *Bilateral Renal Hypernephroma*—Lewis Michelson, M. D., 434 Medico-Dental Building, 384 Post Street, San Francisco.

(1) Rarity of bilateral type—not over ten cases reported in the literature. (2) Discussion as to probability of one tumor being metastatic. (3) Finding of bilateral tumors stresses the necessity of complete urologic investigation, including bilateral ureteropyelograms. (4) Report of case; lantern slides showing gross pathology, microscopic pathology, and ureteropyelograms.

147. *The Treatment of Cancer of the Kidney: Its Present-Day Status and End-Results*—Charles P. Mathé, M. D., 450 Sutter Street, San Francisco.

This paper considers present-day methods of treatment, including nephrectomy, irradiation, etc. Study of end-results obtained in patients treated over a period of twenty years reveals that nephrectomy is the treatment of choice. Cures are admittedly small, but these can be increased by early diagnosis and by employment of certain technical surgical points.

Discussion by Sidney Olsen, M. D., San Francisco; Lionel P. Player, M. D., San Francisco; Wirt Dakin, M. D., Los Angeles.

148. *Evidence of Embryologic Predisposition to Prostatic Malignancy*—Roger W. Barnes, M. D., 707 Medico-Dental Building, Los Angeles, and B. M. Harrison, Ph. D., Los Angeles. (By invitation.)

The prostatic tubule Anlagen of the eight centimeter human embryo begin as solid epithelial evaginations from the urethral mucosa. This development is symmetrical in the middle lobe, more irregular in the lateral lobes, and very irregular in the posterior lobe. This corresponds to the occurrence of carcinoma in these lobes.

Discussion by B. H. Hager, M. D., Los Angeles; Nathan G. Hale, M. D., Sacramento.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section (Adv. pages 2, 4 and 6).

CALIFORNIA MEDICAL ASSOCIATION

ROBERT A. PEERS.....President
EDWARD M. PALLETTE.....President-Elect
FREDERICK C. WARNSHUIS.....Secretary-Treasurer and Associate Editor for California

STATE AND COUNTY SOCIETY ACTIVITIES COMMITTEE RESPONSIBILITIES

Committee Members, Attention!

A committee is defined as: "A body of persons appointed or elected to consider, investigate, or take action upon, and usually to report concerning some matter or business."

This Association has several standing and special committees created by the by-laws, House of Delegates, or the Council. The by-laws, or a resolution, sets forth the duties and assignments made to these committees. They report from time to time to the House of Delegates. Because committees of organizations similar to ours so very frequently exist and function in name only, many facetious remarks have been made concerning committees. A common definition is: "A group of members among whom the chairman as a rule is the only active worker." Committee appointment entails a very definite responsibility, and committee membership should not be accepted unless the appointee seriously accepts the responsibility and is willing to discharge his duties.

Our Association records reveal that exceptionally good work has been accomplished by some of our committees. Again the same records show that other committees have done nothing and have never conferred. Ours is a great State with vast areas. Committee members reside in areas that are distant to each other by hundreds of miles. For committeemen to meet requires travel of long distances and contribution of one to two days of time away from practice. This important fact is appreciated and undoubtedly is the reason why some of our standing committees have held no conferences. In that respect California is different from many other states, where committeemen in one or two hours' travel by automobile can meet in a central place.

However, our Council is desirous of stimulating committee work and overcoming physical obstacles in so far as possible. Our committees are *all important ones*. They are composed of some eighty selected members. The Council feels that they can, by the exercise of their judgment, make valuable recommendations that will undoubtedly be most valuable and helpful in reaching satisfactory solution of problems as well as planning for the future. The House of Delegates and the Council are desirous of securing their aid, and to that end the following action has been recorded.

The State Secretary has been instructed to arrange a general conference of all committee chairmen and members in Coronado on May 24, at 2 p. m., the Sunday preceding our annual session. At this conference some of our major Association problems will be presented. Following this brief conference, each committee chairman and his committee members will be expected to adjourn to suitable quarters and hold a committee meeting for discussion of committee questions and the drafting of a report and recommendations to the House of Delegates or the Council. The hotel bills for one day of each committee member in attendance at this conference and his committee meeting will be reimbursed to him by the Council, thus compensating him for the extra day of hotel expense. A notice of this conference will be mailed to each committeeman on May 1 as a personal reminder.

The Council trusts that in this way greater committee activity will be evidenced and, naturally, that our Association will benefit materially by reason of enlisting these members in a more active rôle. The urgent request is made that all committee members arrange to attend this conference.

PRE-CONVENTION BULLETIN

The May issue will contain the pre-convention bulletin. In it will be found the reports of your officers, special and standing committees. These should be read not only by every delegate, but by every member. By reading them an insight will be gained of the activities of the Association, its policies and problems. There can be no sound solution of a problem without a clear understanding of its nature and all that is involved. Solutions are necessary, and members must aid in bringing about sound solutions. Therefore, read these reports and discuss them with your delegates in order that delegates may reflect your wishes and judgment.

The more vocative members, the more responsive results will be evidenced by the House of Delegates.

PRINCIPLES OF MEDICAL ETHICS

Physicians come and go. Physicians do forget, often unintentionally. Nothing relating to professional conduct has ever been written that so fully sets forth, in terse form, the rules of professional conduct as do the Principles of Medical Ethics adopted by the American Medical Association.

Because physicians forget, and because, regrettable as it may seem, many physicians have never read these principles and, lastly, because young men are just entering practice and that it behooves them to be guided by these principles, one or more chapters will be reprinted in succeeding issues. Read them—observe them.

PRINCIPLES OF MEDICAL ETHICS

Chapter I

In General

THE PHYSICIAN'S RESPONSIBILITY

Section 1. A profession has for its prime object the service it can render to humanity; reward or financial gain should be a subordinate consideration. The practice of medicine is a profession. In choosing this profession an individual assumes an obligation to conduct himself in accord with its ideals.

GROUPS AND CLINICS

Sec. 2. The ethical principles actuating and governing a group or clinic are exactly the same as those applicable to the individual. As a group or clinic is composed of individual doctors, each of whom, whether employer, employee or partner, is subject to the principles of ethics herein elaborated, the uniting into a business or professional organization does not relieve them either individually or as a group from the obligation they assume when entering the profession.

Chapter II

The Duties of Physicians to Their Patients

Section 1. Patience and delicacy should characterize all the acts of a physician. The confidences concerning individual or domestic life entrusted by a patient to a physician and the defects of disposition or flaws of character observed in patients during medical attendance should be held as a trust and should never be revealed except when imperatively required by the laws of the state. There are

occasions, however, when a physician must determine whether or not his duty to society requires him to take definite action to protect a healthy individual from becoming infected, because the physician has knowledge, obtained through the confidences entrusted to him as a physician, of a communicable disease to which the healthy individual is about to be exposed. In such a case the physician should act as he would desire another to act toward one of his own family under like circumstances. Before he determines his course, the physician should know the civil law of his commonwealth concerning privileged communications.

AS OTHERS SEE AND APPRAISE OUR JOURNAL

By Council action, officers and trustees of the American Medical Association and delegates to the American Medical Association have been placed on our mailing list. Each month they receive a copy of our JOURNAL and, therefore, these recipients are provided with authentic facts regarding our Association and State. It is hoped that clearer understanding and cordial consideration will obtain.

We quote some of the comments that recipients have volunteered. Names are omitted for obvious reasons:

Washington: "I shall be pleased to receive it, as I know it to be a very valuable publication."

New Jersey: "At a meeting of our trustees, endorsed your resolution."

Illinois: "I am reading your journal with interest, and find much commendable material in it. It is a fine idea to keep the delegates posted on the problems of different states."

Iowa: "I have found much interest in it. It will help us to appreciate the many facts of California's problems."

Pennsylvania: "California has been forced by local influences to aggressively meet a radical element not experienced in any other state. Your experience is most valuable to those of us who have impending similar problems. For these reasons I welcome the opportunity to observe your technique."

Connecticut: "I shall endeavor to absorb the viewpoint of my former confrères on the Pacific Coast and I shall certainly be interested in their experiments."

Georgia: "I have received two numbers, which I have read with much interest and pleasure."

Pennsylvania: "Find it to be of high grade in every particular. I can learn much about western medical economics."

Wisconsin: "I have read with pleasure and appreciate the receipt of your very excellent publication."

Virginia: "May I congratulate you for this most excellent publication. It will be a great addition to my library."

Nebraska: "I shall be glad to watch your current events."

Indiana: "It is a very excellent publication and contains a large amount of valuable material."

Iowa: "I wish that the officers of all state associations would concern themselves with such matters. Your publication is a credit to the profession of California."

Tennessee: "I have already obtained valuable information from the two copies received."

Ohio: "I read your journal from cover to cover, and it is good."

Michigan: "Thanks. It will be interesting to hear what the trustees have to say."

Texas: "I certainly am fixed in my opinion that the officials of the American Medical Association should not assume to represent the medical profession of this country except and until it is a fact that their views coincide with the expressed views of the House of Delegates."

Tennessee: "Appreciate your sending me a copy."

Illinois: "I personally approve."

Our thanks to these men who acknowledged receipt of our JOURNAL.

PLAYING THE GAME

In yesterdays the cheating poker player was shot, the cattle rustler was hung, the deserting soldier met the firing squad. Drastic measures, it is true, but in those yesteryears they were invoked against all who failed to play the game on the square.

It is equally requisite to play the game square today, be it poker, golf, business or professional practice of any branch of the learned profession, or social and political activities. Infractions are dealt with, but not with the noose or bullet. Civilization has supplanted them with the standards of gentlemen and the principles of *les affaires*.

There are some today who ignore these principles to their own very great detriment and indirectly to the detriment of and reflection upon their fellow practitioners. In their quest for income, sometimes under financial stress, many times thoughtlessly and by some intentionally, these principles and standards are violated. There is evidenced underbidding in fees, contract practice is engaged in, services for a given sum is rendered to a group or lodge, solicitation of patients is resorted to, and unfair unethical competition is engaged in—these violators are not playing the game. They no longer merit their degree or license. There is a blot and blemish on their career. They forfeit their right to honorable recognition and personal respect. They have "sold out" for a price and sacrificed principles. There can be, there is no justification for their action. They place themselves amenable to present penalties just as did their ilk in yesterdays, when the noose and the bullet meted out punishment. Ere it be too late and yielding is a temptation, the advice is given to "Stop, look, and listen," and if erring to repent and play the game on the square.

IMPARTING CALIFORNIA'S PROBLEMS AND POLICIES TO EASTERN COLLEAGUES

There has been, and still is, much misinformation, lack of information, and misunderstanding in the minds of many eastern colleagues regarding medico-economic conditions in California. The underlying reason is that very few of those living beyond the Rockies have a true conception of existing conditions, and with the possession of a few superficial facts and some distorted facts opinions have been voiced and unjustified criticism advanced.

One mid-state journal, in making comment, referred to us as "California Pollyannas"! Even in official circles there have been misrepresentations that have reflected some maliciousness and personal malice. Individual opinions, not always representative, expressed in nonofficial correspondence, have been employed as grounds for eastern and official opinions pertaining to our organization in California. In the past two years there have been received only a very rare and occasional request, addressed to the Council, constituted officials or representative committees, for official information.

The Council has determined that this condition shall no longer obtain. Steps have been taken to disabuse eastern minds from their uninformed attitudes. By Council action, CALIFORNIA AND WESTERN MEDICINE will be sent each month to the American Medical Association trustees, members of the American Medical Association House of Delegates, and certain state medical officers. An exchange copy has for many years been sent to editors of state medical journals. One recipient from Iowa has replied: "I think sending this journal to all members of the House of Delegates will help them appreciate the many facts of California's medical problems." Similar replies have been received from other national delegates. The sincere hope is expressed that the action of our Council will go far in correcting wrong impressions and will deter others from formulating opinions and attitudes that are not based on facts.

The members of the California Medical Association are endowed with the average, and possibly more than the average, of good judgment that begets sound opinions and policies. They claim ability to analyze existing conditions and to formulate policies that will best meet those conditions. They are not without idealism. They embrace and applaud the fundamentals of organized medicine as they have been advanced in this nation. Their allegiances and motives require no apologies. They ask that they be understood and that they be not misrepresented. This constitutes the reason for the sending of their official publication to those who constitute their national governing body and so cause them to learn that California is not reactionary.

The problems on the Pacific Coast—California, Oregon, and Washington—are vastly different from those on the Atlantic Coast and of the intervening states. To those colleagues who reside in the East the assurance is given that their colleagues on the western coast are true to the traditions of the profession and that they earnestly seek to cause them to conform to the existing actualities of their immediate domain.

ANNUAL PROGRAM

Elsewhere in this issue the program for our annual session is printed. Please refer to it. Note the titles of papers and speakers. Observe the features, exhibits, entertainment, and all the other details. Having done so, ask yourself if you can afford to miss attending and forego embracing this opportunity for personal profit. Plan to attend.

The members of the San Diego County Medical Society urge you to accept their cordial invitation to attend and enjoy their hospitality. Ample and satisfactory hotel accommodations are available in San Diego, but you must write for reservations. Do so today.

An added attraction is the San Diego Exposition and its Hall of Medical Science. Special, reduced admission rates to the Exposition will be granted to our members. You will want to visit the Exposition.

All in all considered, attendance at our annual session, a visit to the Exposition, mingling with your fellows, and participating in the social functions, will more than repay you for your time. Plan to attend. Write for your hotel reservations.

REDUCED RAILWAY FARES

Arrangements have been made whereby members going by train to the annual session in Coronado may secure reduced railroad fares.

To secure these reduced rates *send your request and a self-addressed stamped envelope* to the State Secretary. A certificate will be mailed to you promptly. Present this certificate to your ticket agent when purchasing transportation. This certificate is necessary to secure reduced rates.

The following information comes from the railway passenger department:

ROUND-TRIP RAIL CONVENTION FARES AND ARRANGEMENTS

Ticket agents of principal rail lines in California, on presentation and surrender of identification certificate, will sell round-trip tickets to San Diego costing approximately one and one-quarter cents per mile, which is less than the first-class one-way fare. Tickets will be sold from May 20 to 28, inclusive, and return limit will be June 7. Stopovers allowed. If longer return limit is desired, consult railroad ticket agent at San Diego prior to June 7.

Following are examples of fares to San Diego, and illustrate the extent of reductions.

From	One-Way		Convention		Ten-Day		21-Day	
	First Class	Coach	Round Trip (85%)	Coach	Round Trip	Coach	Round Trip	First Class
San Francisco	\$18.59	\$12.54	\$15.85	\$22.58	\$24.85			
San Jose	17.19	11.61	14.65	20.90	23.00			
Los Angeles	12.79	8.67	10.90	15.61	17.20			

ENDOWMENTS

In the March issue, under the caption of "I Give and Bequeath," the suggestion was made that members give serious consideration to providing bequests to an Association Endowment Fund. The principal of the bequest to remain intact in perpetuity and in memory of some relative or for some specific purpose. The investment earnings to be credited to the Association's annual income and to be expended for the expansion of Association activities.

In the same issue Editor Kress enlarged upon this proposal and advanced very pertinent reasons as to why bequests should be made to an endowment fund for our Association. It is hoped that the two comments were read and not forgotten. The wish is that favorable response was inspired and that members who are financially able took the necessary steps to legalize bequests. It would be a most pleasing experience to receive such a contribution and gift ere our annual meeting in May. Surely, there are some who can tender such a bequest or gift with no financial embarrassment. To such the appeal is made to respond in order to initiate this endowment fund and inspire others to follow their example. The central office trusts that you will respond.

ON RESOLUTIONS AND REPORTS TO BE SUBMITTED AT THE ANNUAL SESSION*

Instructions to Reference Committees and Rules Governing Introduction of Resolutions and Reports in the House of Delegates

Enactment: The House of Delegates creates the following procedure and rules governing the introduction of resolutions and reports of officers and committees and their consideration by the Reference Committees of the House of Delegates.

Introduction of Resolutions:

1. All resolutions introduced in the House of Delegates must be presented in triplicate and signed.

2. Delegates contemplating the introduction of resolutions will expedite the deliberations if such resolutions are sent to the Association's secretary thirty (30) days before the House convenes. They will be printed in the Pre-Convention Bulletin for the advance information of delegates.

3. In presenting a resolution the delegate shall not engage in any introductory comment or argument. He shall read only the context of the resolution. The speaker will then refer it to the proper Reference Committee, if the resolution is in order, and the secretary shall make every possible effort to place copies of the resolution in the hands of each member of the House of Delegates before the next meeting of the House.

4. The introducer and any delegate interested in a resolution should appear before the Reference Committee to present facts and arguments. Further discussion is then to be deferred until the Reference Committee submits its report and recommendations to the House of Delegates.

Reference Committee Procedures:

1. Reference Committee chairmen will be given a portfolio containing a copy of all resolutions, reports, or matters referred to their committees at the close of each session of the House of Delegates.

2. Reference Committee chairmen, before the adjournment of each session of the House of Delegates, shall announce the time and place of the meeting of their committees.

3. Delegates are requested to advise Reference Committee chairmen of their desire to appear before a committee and obtain an appointment.

4. Reference Committees will review and consider each resolution, report, and all matters referred to the committees and may approve, disapprove or amend any offered resolution or offer a substitute resolution for it.

5. The speaker, councilors, and secretary shall be available for consultation and advice, and Reference Committees should avail themselves of their services.

6. At the conclusion of a hearing and the consideration of resolutions or questions, the Reference Committees shall observe the following procedure when reporting to the House of Delegates:

(a) The reports of the Reference Committees shall be in writing and signed by all the Reference Committee members present and acting. The original resolutions and questions shall be set forth in the report in their proper places.

(b) The committee shall briefly summarize their findings and comments on each resolution or question.

(c) The committee shall recommend the following action:

1. That the resolution be adopted.
2. That the resolution be not adopted.
3. That an amended or redrafted resolution offered by the Reference Committee be considered and adopted as a substitute for the original resolution.

7. The Reference Committee, to whom reports of officers and standing or special committees are referred, shall submit a written report, signed by all the members present and acting, of the committee. The following findings and comments shall be set forth in its report to the House of Delegates.

(a) A brief summary and comment emphasizing the outstanding features of the address or report.

(b) Explanation as to what the Standing Committee's recommendation entails.

(c) Recommending the action to be taken, namely, to approve, adopt or disapprove or amend.

8. Delegates may then make such motions or arguments, and the House of Delegates may take such action as are permitted by parliamentary rules and the Constitution and By-Laws.

* Delegates are requested to observe these regulations that were adopted at the 1935 annual session. Particular attention is invited to paragraphs 1, 2, and 3, relating to the introduction of resolutions.

CANCER COMMISSION STUDIES

The cancer diagnostic and treatment surveys of the California Cancer Commission, published in *CALIFORNIA AND WESTERN MEDICINE*, 1932 to 1934, are now being reprinted in convenient book form for general sale. Retail price will be 75 cents. For institutions desiring copies for distribution to students, interns, etc., the following discounts are available:

- 25 to 100 copies, 20 per cent
- 100 to 500 copies, 25 per cent
- 500 to 1000 copies, 33 1/3 per cent
- 1000 copies or over, 40 per cent

Orders should be sent direct to J. W. Stacey, Inc., 236 Flood Building, San Francisco.

POSTGRADUATE CONFERENCE AT UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL

The program is announced in detail in another column. The faculty of the University of California Medical School tenders to our members, through our Committee on Postgraduate Education, this conference as its contribution and participation to our postgraduate activities. The conference is open to our members in good standing. No fees will be charged. Patients, pathologic specimens, and films will be presented. Practical application will be featured.

This opportunity should be embraced by every member who can possibly do so. Your time will be spent in a profitable manner, and you will gain much that will be helpful in your practice.

Note the date. Arrange to attend. You owe this to yourself.

The program follows:

Tuesday, April 21

- 9-11—Obstetrics and Gynecology—Frank W. Lynch and Associates.
- 11-12—Applied Anatomy—The Vertebral Column—John B. deC. M. Saunders.
- 2-4—Newer Procedures in Chest Surgery—Harold Brunn and Associates.

Wednesday, April 22

- 9-11—Medicine—William J. Kerr and Associates.
- 11-12—Undulant Fever and Plague—Karl Meyer.
- 2-4—Newer Orthopedic Procedures—LeRoy C. Abbott and Associates.

Thursday, April 23

- 9-11—Pediatrics—Francis S. Smyth and Associates.
- 11-12—Clinical Pathological Conference—Charles L. Connor and Clinical Staff.
- 2-4—Museum, Library, Laboratory.

Friday, April 24

- 9-11—Surgery—Howard C. Naffziger and Associates.
- 11-12—Traumatic Injury to Chest and Abdomen—George K. Rhodes.

MINUTES OF THE EXECUTIVE COMMITTEE

1. The scheduled meeting of the Executive Committee for March 7, 1936, was called to order by Chairman Karl L. Schaupp in the home of President Robert A. Peers, Colfax, California, at 1:30 p. m., with the following present: President Robert A. Peers, President-elect Edward M. Pallette, Speaker W. W. Roblee, Chairman of the Council T. Henshaw Kelly, Chairman of Executive Committee Karl L. Schaupp, Chairman of Public Relations Committee Charles A. Dukes, Editor George H. Kress, Secretary F. C. Warnshuis, and General Counsel Hartley F. Peart.

2. President-elect Pallette presented to the Executive Committee the gist of a conversation that he had with the chairman of a special committee of the Bar Association dealing with expert testimony. He stated that the request had been made that the California Medical Association appoint three members of the Association to confer with that Bar committee.

Upon motion of Doctor Pallette, seconded by Doctor Dukes, the chairman of the Executive Committee was directed to appoint three members from the south to represent the California Medical Association in such confer-

ence, and that if a similar request comes from a like committee in the northern section, of the Bar Association, the chairman be authorized to appoint three members from the north to act in a like capacity. Carried.

The chairman appointed Edward M. Pallette, William L. Weber, and Glenn Myers.

3. The secretary presented a communication from the officers of the Kern County Medical Society, which contained a resolution placing that component county society on record as favoring an increase in membership dues of \$2.50 per member.

Upon motion of Doctor Kelly, seconded by Doctor Dukes, the secretary was instructed to acknowledge receipt of the communication and express appreciation of the spirit in which it was offered, and refer it to the next Council meeting for action and report to the House of Delegates.

4. The secretary presented a communication from the legal counsel, Mr. Hartley Peart, relative to the financial expense entailed in appealing the *Chalmers-Francis vs. Dagmar Nelson* case. The chairman of the Auditing Committee recommended that an additional appropriation of \$450 be made for the purpose of continuing this case before the Court of Appeal.

Upon motion of Doctor Peers, seconded by Doctor Dukes, the Executive Committee appropriated the sum of \$450 additional for expenses in this legal case and instructed the secretary to send a copy of all the communications relating to this case to the officers of the Section on Anesthesiology and to use his best endeavors to obtain reimbursement of this sum in accordance with the correspondence that had been had with those representing the anesthesiologists. Carried.

5. The secretary presented a communication from the secretary of the Los Angeles County Medical Association relative to methods that were being employed in the enforcement of the provisions of the Narcotic Act, and citing a specific case.

Upon motion of Doctor Pallette, seconded by Doctor Roblee, the secretary was instructed to secure more information upon the subject and present the same for consideration at its next meeting. Carried.

6. The secretary presented a communication with the Williams & Wilkins Company, in which there had been raised the question of infringement of copyright of articles appearing in *CALIFORNIA AND WESTERN MEDICINE*.

Upon motion of Doctor Pallette, seconded by Doctor Kelly, the secretary's reply was approved, and it was directed that any requests for reprinting of articles copyrighted in *CALIFORNIA AND WESTERN MEDICINE* be subject to the approval of the editor and the secretary and the Council. Carried.

7. The secretary presented a communication that he had addressed to the president of the San Francisco 1939 Exposition and the reply received thereon. The secretary recommended the appointment of a committee representing the Association to continue these negotiations.

Upon motion of Doctor Kress, seconded by Doctor Peers, the chairman of the Executive Committee was directed to appoint three members of the Association to serve upon this committee and that they were authorized to appoint such advisory members as they deem advisable and that all the activities of the committee be without expense to the Association. Carried.

8. The secretary presented a communication from Mr. V. W. Olney, secretary of the Associated Hospital Service, Incorporated, relative to the Association's position in regard to hospital insurance, and the reply of the secretary to that letter.

Upon motion of Doctor Pallette, seconded by Doctor Roblee, the Executive Committee approved the reply as read by the secretary. Carried.

9. Upon motion of Doctor Dukes, seconded by Doctor Pallette, the secretary was instructed to secure necessary information in regard to accommodations available in all localities seeking to secure the 1937 annual meeting of the Association.

10. Upon motion of Doctor Kelly, seconded by Doctor Dukes, the secretary was instructed to arrange for the president's dinner in connection with the annual meeting

and to provide a suitable program of entertainment after the dinner, and that the Council be requested to set aside a reasonable amount for the expense of such entertainment.

11. The secretary presented a communication from Dr. Olin West, secretary of the American Medical Association, transmitting the action and reply of the Board of Trustees of the American Medical Association to the resolution adopted by the Council of the California Medical Association.

Upon motion of Doctor Roblee, the following resolution was adopted, and carried:

WHEREAS, The reply of the Board of Trustees of the American Medical Association conveying suggestions and requests of the California Medical Association regarding the methods of the editor of the *Journal of the American Medical Association* evaded the specific inquiries of this organization and contained a great insult to the secretary of the California Medical Association; now, therefore, be it

Resolved, That the chairman of the Executive Committee be instructed to appoint a committee of three to draft a reply to this communication and submit the same to the Council for approval at its next meeting on April 11.

The chairman appointed as members of the Special Committee, Councilors Kelly, Gibbons, and Schaupp.

12. The secretary presented a communication from Dr. J. C. Geiger of San Francisco expressing his personal opinion regarding the resolution adopted by the Council relative to the editor of the *Journal of the American Medical Association*, and upon motion duly made and carried, the secretary was directed that the letter be placed on file and that Doctor Geiger be sent a letter of thanks for his interest in the matter.

13. The secretary presented a request from the attorneys representing the appellants from the action of the Kern County Medical Society. Upon advice of the legal counsel, Mr. Peart, the following motion was made by Doctor Kelly, seconded by Doctor Peers:

That the legal representatives of the appellants be permitted to see the records of the hearing held before the Kern County Medical Society and that they be furnished with a copy of that record upon their agreement to pay for the cost thereof.

14. Upon motion of Doctor Kelly, seconded by Doctor Kress, the Executive Committee recommends that the Council adhere to its rules adopted at the last meeting in regard to the appearance of legal counsel at any appeal hearings.

15. Editor Kress presented a recommendation that the secretary arrange for a conference of chairmen and committeemen of all Standing Committees and Special Committees for the purpose of becoming more intimately acquainted with the problems of the Association and for the purpose of making recommendations, on Sunday, May 24, 1936, at Coronado at 2 p. m., and that the president and the secretary be in charge of this conference, and that notice be sent to the chairman and members of each committee urging their attendance and that the Council appropriate a reasonable sum to defray the hotel expense for one extra day for those attending this conference. Carried.

16. Dr. T. Henshaw Kelly made a verbal report for the Special Committee that was to confer with the Committee of Five, and it was accepted and filed.

On motion of Doctor Pallette, seconded by Doctor Dukes, the expenses of this committee and those of the Committee of Five in attending the meeting on February 23, 1936, were ordered paid. Carried.

17. Doctor Roblee, chairman of the Special Committee on Disciplinary Procedure, outlined certain of the details that would be contained in the report that he is to submit to the House of Delegates.

On motion of Doctor Pallette, seconded by Doctor Kelly, a recommendation was made to this committee that their procedures be presented in the form of an amendment to the by-laws of the Association. Carried.

18. Information was transmitted that the Pacific Employers' Insurance Company were continuing to issue their policies for hospital and medical care, in violation of the State Statutes.

Upon motion of Doctor Roblee, seconded by Doctor Pallette, the secretary was instructed to secure infor-

mation thereon and present his findings at the next meeting of the Council. Carried.

19. Legal counsel, Hartley F. Peart, presented a communication relative to malpractice insurance. The secretary was instructed to refer this to the Special Committee on Malpractice Insurance.

20. Discussion was had relative to this Association's representation in the House of Delegates. The secretary was instructed to place this upon the docket for the next meeting of the Council.

21. President Peers of Colfax presented an official communication addressed to him from R. D. Brisbane, secretary of the Superior California Hospital Association, making certain comments upon the Association's policy relative to hospital insurance.

Upon motion of Doctor Kress, seconded by Doctor Kelly, the secretary was directed to reply to this communication and transmit the same information as was contained in the letter addressed to the Associated Hospital Service, Incorporated, and to refer the communication for further action to the Committee on Public Relations. Carried.

22. Mr. Peart reported on the present status of the *Goodall vs. Brite* case and imparted the information that the supervisors of Kern County and the legal representatives of eleven other counties as an *amicus curiae* had appealed this case to the Supreme Court of California.

23. The secretary presented a communication from Councilor Schoff relative to activities in certain counties directed toward the formation of local groups desiring to obtain medical services at a per monthly fee rate.

The secretary was directed to reply to this communication and to point out to the members of the local profession that such proposals were in violation of the State Statutes and that prosecution be advised through the office of the District Attorney.

24. The secretary presented a communication from Councilor Schoff relative to certain advertisements which are appearing in our official journal.

Upon motion of Doctor Pallette, seconded by Doctor Kress, the secretary was directed to make an investigation and present his findings to the Council. Carried.

25. Upon motion of Doctor Kelly, seconded by Doctor Pallette, the secretary was directed to secure the services of a court stenographer to record the actions of the Council at its meeting on April 11, when it hears the appeals of certain members from actions of their county societies. Carried.

26. Upon motion of Doctor Kelly, seconded by Doctor Roblee, the secretary was directed to call the first meeting of the Council at Coronado for 8 p. m. on Sunday, May 24. Carried.

27. Upon motion of Doctor Roblee, seconded by Doctor Pallette, the secretary was directed to schedule the first meeting of the House of Delegates for 7:30 p. m. on Monday, May 25. Carried.

28. Upon motion of Doctor Peers, seconded by Doctor Kress, the secretary was directed to arrange for a Council and county officers luncheon, Tuesday noon, May 26.

29. There being no further business, the meeting adjourned at 5:45 p. m.

KARL L. SCHAUPP, *Chairman*.
F. C. WARNSHUIS, *Secretary*.

Teamwork.—I have heard told that out in the solitude of a great desert when a caravan is in danger of perishing for want of water they give one camel its head and turn it loose. The inherent instinct of the animal will lead him unerringly to the refreshing spring. As soon as he is but a speck on the horizon, one of the Arabs mounts and sets off in the direction taken by the liberated animal. When he in turn is just visible, another Arab mounts and follows. When the loose camel discovers water, the first Arab signals the second, the second the third, and so on until the message is relayed back and all of the party are gathered at the life-saving spring.

That is teamwork and there are many ways in which organized medicine can utilize this principle, for teamwork must characterize our Association and its constituent units.

COMPONENT COUNTY MEDICAL SOCIETIES

IMPERIAL COUNTY

It was with pleasure that the Imperial County Medical Society had as their guests at the regular monthly meeting, February 17, Dr. Robert A. Peers of Colfax, president, and Dr. Frederick C. Warnshuis, secretary, of the California Medical Association.

The following names were voted on and approved for membership: Doctors Harry P. Findley and Warren Fox of El Centro, and Donald Marchus of Winterhaven. With the admittance to the Society of these physicians, Imperial County has 100 per cent of the eligible men belonging to the Society.

At the request of Dr. Fred Gregg of Calexico, the Society took action favoring the formation of a Woman's Auxiliary.

Dr. L. C. House of El Centro was elected as delegate to the session of the California Medical Association, with Dr. Philip Hodgkin of El Centro as alternate.

It was announced that the Imperial County Tuberculosis Association would hold a chest clinic in El Centro on March 3, and that Dr. Chesly Bush, medical director of the Alameda County Tuberculosis Hospital would be in charge and that in the evening at a dinner he would present a paper on the treatment of certain chest conditions.

Dr. Robert Peers, after being presented to the Society, spoke upon the work and organization of the State Association, stated that there were 5,402 members at present and it was their desire to have every eligible physician of the State belong, and commended Imperial County for having 100 per cent of their eligible men as members. He stressed the importance of carefully choosing the delegates and to be sure that they are fully instructed as to the desires of their society. Doctor Peers also spoke about the JOURNAL, calling attention to the different departments, and made especial reference to the editorials, which voice the sentiment of the Association. He stated that we should consult the councilor of our district (San Diego, Riverside, Orange, San Bernardino, and Imperial counties), Dr. C. L. Emmons of Ontario, often and to refer problems arising to him. In closing, Doctor Peers stressed the importance of attending the State Association convention at Coronado, May 25 to 28.

Doctor Warnshuis was introduced next and spoke at considerable length on the responsibilities of organized medicine. He stated that in order to remain abreast of scientific progress it was the aim of the State Association to present to the component societies a series of post-graduate courses. He then outlined the method by which Imperial County could take advantage of this extension course. Doctor Warnshuis mentioned briefly the work the State Association is doing in presenting to the public, through the press, articles on scientific medical care and education. He mentioned the public health institutes that are being held, visualizing health by demonstration. In closing, he mentioned the scientific exhibits of the San Diego Fair, under the direction of the California Medical Association.

MERRITT C. CANFIELD, *Secretary*.

✽

ORANGE COUNTY

The Orange County Medical Association is a very lively organization under the leadership of our new president, Dr. John Ball of Santa Ana, who took office in January. The January meeting, held on the 7th, was our annual banquet, at which time Dr. John Ball was installed as president; Dr. Waldo Wehrly, first vice-president; Dr. C. Glenn Curtis, secretary-treasurer; Dr. C. D. Ball, librarian; and Dr. L. Cameron, editor of the Bulletin. This banquet was extremely unique in all its features, and apparently was enjoyed by everyone. There were approximately one hundred present. The guest speaker for the evening was Dean W. T. Boyce of the Fullerton Junior College. His address was entitled *Education for a New Age*, in which he outlined the trend of thought and education which is applicable to the younger generation.

A special meeting was called on February 18 at the Orange County Hospital Chapel, at which time we were honored in having our State President Dr. Robert Peers, State Secretary Dr. Frederick C. Warnshuis, and our District Councilor Dr. C. L. Emmons of Ontario. This meeting gave the visiting gentlemen a very good opportunity to speak their wishes and ambitions for the coming year. It also gave some of our own local members an opportunity to get off of their chests some of the things which were apparently disturbing them regarding our state medical set-up. This meeting was a very successful one, in my opinion, and I hope that we will be able to have such gatherings more often, as they tend to help us become better acquainted with the men and also the problems of those who are at the head of our wonderful organization.

✽ ✽ ✽

The regular meeting of the Orange County Medical Association was held at the Orange County Hospital at 8 p. m. on March 3. The meeting was called to order by Dr. John Ball.

The first order of business was a free, frank, open discussion of the present status of the Santa Ana Valley Hospital. We were honored in having present at this meeting a representative of the Santa Ana Chamber of Commerce, who pointed out the feeling of the Chamber of Commerce that it was a shame such a well-equipped hospital should not be recognized and used more generally by the medical profession. A special committee, consisting of Doctors Harry Huffman, Hiram Currey, and Newell Moore, were appointed to work with the Santa Ana Chamber of Commerce, and if possible to outline a program whereby the Santa Ana Valley Hospital will be recognized by the American Medical Association and again take its place in the community as a health center.

Dr. Francis M. McKeever of Los Angeles gave us a very practical and vivid discussion of the fractures of the elbow-joint in children, explaining the details of the mechanics, reduction, treatment, and after-results, in such a simple manner that there should be no difficulty in handling this special type of fracture by the physicians who follow his technique in detail.

The applications of Dr. Chad M. Harwood of Santa Ana and Dr. Leonard M. Taylor of Brea were given their first reading.

Our next meeting was postponed to April 21, in order to give the members an opportunity to attend the San Bernardino Postgraduate Assembly, which is being held on April 2, our regular meeting night.

C. GLENN CURTIS, *Secretary*.

✽

SAN MATEO COUNTY

The meeting of the San Mateo County Medical Society was held in the banquet room of the Benjamin Franklin Hotel on February 26, Doctor Holmes presiding.

Doctors William J. Kerr, Perry Bonar, L. H. Garland, and Harold Hill were received into the Society as associate members.

A letter to the Society from the San Mateo Civic League, anent the County Department of Health and Social Service, was read by the secretary.

It was decided to ask Dr. John J. Sippy, director of public health of San Joaquin County, to address the Society at its April meeting. It was further decided to invite the Medical Society of the Veterans' Administration Facilities to attend this meeting. Doctor Benner made a motion that various civic groups and lay organizations be invited to hear Doctor Sippy at the April meeting. During the discussion which followed, the fact was brought out that the physicians of this county were as yet unaware of the *modus operandi* of the public health districts in San Joaquin County, and that at the present time it would not be desirable to invite lay groups to this meeting. The motion was put to a vote and lost. A resolution was then made to invite the Medical Society of the Veterans' Administration Facilities for a joint meeting in April.

Doctor Holmes announced that at the Board of Directors' meeting the names of Doctors Ray and Bridgman had been recommended for delegate and alternate to the State Association meeting in May. Doctor Benner made a motion that the action of the Board of Directors be approved. Motion carried.

Doctor Holmes introduced the first speaker of the evening, Dr. Robert A. Peers, president of the California Medical Association. Doctor Peers mentioned the increasing interest on the part of physicians in organized medicine, and explained many of the devices by which physicians are represented in the State Association. He outlined the function of the House of Delegates and the function and operation of the Council of the California Medical Association. He asked that members of county medical societies study problems of organized medicine, and recommended that county society secretaries send the minutes of their meetings to the secretary of the California Medical Association in order to help maintain close liaison with the parent organization. He further suggested that district councilors be invited to attend county society meetings.

Doctor Warnshuis was next introduced, who spoke on *Organizational Responsibilities and Activities*. He stated that the responsibilities of organized medicine were (1) to members themselves, by making available possibilities for postgraduate study; (2) education of the laity in regard to medical care, public health, and preventive medicine (accomplished through the medium of the newspapers, by means of speaking corps, and by public health institute programs); (3) legislative responsibilities in connection with such measures as hospital insurance and operation of county hospitals.

The county society expressed its unanimous appreciation to Doctors Peers and Warnshuis for their kindness in addressing the Society.

J. GARWOOD BRIDGMAN, *Secretary*.



SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was called to order by the president, Dr. Frank A. MacDonald, on the evening of February 18, in the Auditorium at Twenty-ninth and L streets, Sacramento.

A most unusual and interesting paper, from a historical and medical standpoint, was afforded the Society by the speaker of the evening, Dr. A. K. Dunlap, who spoke on the life, character, and achievements of John Paul Jones, the founder of the American Navy. The speaker illustrated his topic with lantern slides and related how the body of John Paul Jones was found and identified in a Parisian cemetery, where he had been interred in 1792 during the French Revolution. The cemetery had since lost its identity and many buildings had been erected thereon. Five shafts were sunk on the old cemetery site, and excavations were directed by General Porter, American Ambassador to France, who spent over \$40,000 of his own money in the search for the remains of the famous revolutionary patriot. Five leaden coffins were found, the third of which was identified as that of John Paul Jones. His body was identified grossly through comparisons with known physical measurements of the man and comparisons with busts executed during his lifetime; and, secondly, by autopsy findings, gross and microscopic, by two French physicians, which corroborated the symptoms of his last illness, both pointing to the fact that he died of chronic interstitial nephritis. The corpse was found to be remarkably well preserved at the autopsy performed one hundred and thirteen years after his death. The body of John Paul Jones was brought to Annapolis July 23, 1905, by an American warship escorted by vessels of the French Navy. On April 24, 1906, on the anniversary of the capture of the British warship *Drake* by the decedent, impressive public ceremonies were held at Annapolis, in which President Theodore Roosevelt led the nation in paying public tribute to John Paul Jones. Through inadvertence or neglect, the casket then lay for seven long years on saw-horses in Bancroft Hall after this impressive welcome home to American soil. Then through a

congressional appropriation a beautiful crypt was built and John Paul Jones' body was finally laid to rest permanently in Annapolis on January 26, 1915.

Drs. R. C. Teall and Jiro Muramoto were unanimously elected to membership in the Society. The applications of Drs. La Verne Glenn and Arthur Kahler were read for the first time.

NORRIS R. JONES, *Secretary*.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday evening, March 9, at the Bissell Auditorium, with President Gray presiding.

Dr. William H. Leake of Los Angeles, the speaker of the evening, gave a most interesting and instructive talk upon *Bacterial Heart Diseases*. The paper was discussed by Doctors Nuzum Koefod, Elliot, McNamara, Evans, and Henderson.

Doctor Hare reported the activities of the Publicity Committee for the past month.

Doctors Freidell, Markthaler, Hamilton, Brush, and Van Paing reported their progress in formulating plans for the treatment of alcoholics, and President Gray requested the committee to continue and complete arrangements with the hospitals, and formulate a satisfactory course of treatment which would be available to all members of the Society.

Doctor Freidell announced that about June 1 the Board of Supervisors would appoint a physician to care for the indigent sick in this district. It is to be a full-time position, with a salary of \$250 per month, with full maintenance for the appointee and family on the General Hospital grounds. The appointee is also to act as house physician of the General Hospital and have the supervision of the internes.

A communication from the Woman's Auxiliary to the Santa Barbara County Medical Society, in which they asked for a contribution of \$75 to help further their activities, was read. After some discussion it was moved, seconded and carried, that each member of the Society south of Gaviota be assessed 75 cents.

The following resolution extending the sympathy of the Society to the family of Doctor Merrill was unanimously adopted.

IN MEMORIAM

WHEREAS, The Santa Barbara County Medical Society records, with profound sorrow, the death of our colleague, Dr. Edward R. Merrill, who for many years has been an active and loyal member of our organization; and

WHEREAS, Doctor Merrill, in his chosen profession, has commanded the greatest respect and admiration among his fellow practitioners, and his death is a distinct loss to medicine as well as to our society; therefore, be it

Resolved, That the Santa Barbara County Medical Society convey to the family an expression of the high esteem in which Doctor Merrill was held, and that we extend to them our deepest sympathy in this hour of sorrow; and be it further

Resolved, That this resolution be spread upon the minutes of the meeting of the Santa Barbara County Medical Society, and that a copy be sent to the family.

WILLIAM H. EATON, *Secretary*.



SAN JOAQUIN COUNTY

The San Joaquin County Medical Society met in the Medico-Dental clubroom, Stockton, March 5, at 8:20 p.m., President T. C. O'Connor presiding.

The meeting was preceded by the customary supper meeting, held at the Hotel Wolf, at which there were twenty-one members and two guests present. Dr. C. V. Thompson of Lodi presented a series of *Congenital Anomalies*.

After the opening of the regular meeting, Miss Betty Perrin of the Stockton Convention Bureau invited the San Joaquin County Medical Society to attempt to secure

the California Medical Association meeting for this locality in 1937.

The papers of the evening were presented by Dr. H. C. Shepardson, assistant clinical professor of medicine, University of California Medical School, who spoke on *The Treatment of Diabetic Coma*. The paper was discussed by Doctors Hull, Russell, Wever, and Lisser. Dr. H. Lisser, clinical professor of medicine, University of California Medical School, then presented a very interesting paper on *Adrenal Cortical Syndromes, with Consideration to Cushing's Disease and Adrenoblastoma of the Ovary*. This paper was extremely interesting and evoked considerable discussion.

The application of Doctor Kanagawa for membership and Dr. Thomas F. Thorp for affiliation were acted on and both were declared members of the San Joaquin County Medical Society.

There was a lively discussion from the floor concerning the limiting of speakers to a definite time. No action was taken.

The secretary urged that all members pay their assessments immediately, as those not paying would be dropped from membership in the Society and the California Medical Association as of April 1, 1936.

There being no further business to come before the Society, the meeting was adjourned at 11:45 p.m. and refreshments were served.

G. H. ROHRBACHER, *Secretary*.

✽

SISKIYOU COUNTY

The regular meeting of the Siskiyou County Medical Society was held on January 26 at the home of Doctor Martin in Mount Shasta City. The meeting was called to order by President Dickinson.

The secretary made a report of the proceedings of the annual County Secretaries meeting at San Francisco. A vote of thanks was given him for his attendance.

A brief discussion was held on the subject of a public relations committee. It was moved, seconded and passed, that this society appoint a public relations committee. The following members were appointed by the president: Doctors Runkel, Hart, Campbell, Maguire, and Carlson.

It was moved, seconded and passed, that the offer of the State Association for postgraduate education be approved.

After the regular meeting had adjourned, a very interesting discussion of *Hospital and Medical Legislation* was given by our state assemblyman, H. B. Fulcher.

After Assemblyman Fulcher's talk, several films which had been taken by Doctor Newton, showing his technique for doing thyroidectomy, were shown.

The next meeting will be held in Yreka on March 8.

E. F. CARLSON, *Secretary*.

✽

SOLANO COUNTY

The Solano County Medical Society had a business meeting at the Casa de Vallejo Hotel, Vallejo, on Tuesday evening, March 10, Doctor Chappell presiding.

Dr. J. Porter of Benicia was admitted to membership. Among the matters under discussion were the following: Treatment of children hurt while at school, and responsibility for payment of services to such children.

Postgraduate study.

Medical service to federal employees on a monthly basis.

Free examination of babies in connection with a contest being held by a local photographer.

Newspaper advertising in local papers by out-of-town drugless practitioners, and health articles being run editorially in local papers by these same men.

Ownership of x-ray films.

Dr. J. J. Hogan and Dr. Ervin Casper were elected to honorary membership in the Society.

The secretary made a report of a recent meeting in San Francisco of the Committee to Study County Hospitals.

There were two physicians reported as practicing in the county who are not members of our society, and the secretary was instructed to contact these men.

JOHN W. GREEN, *Secretary*.

✽

TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was held at Motley's Café on the evening of February 23, Doctor McClure presiding. Dinner preceded the meeting.

Dr. Andrew A. Love, otorhinolaryngologist from Los Angeles, presented a paper on *Hay Fever, from the Standpoint of the Otolaryngologist*. He urged conservatism as regards surgical measures for hay fever, and specific allergic therapy. A round-table of discussion followed.

Dr. L. E. Watke of Tulare, whose application was recently received, was unanimously elected to membership.

Various communications were read, among them an invitation by the Fresno County Medical Society to attend a meeting on March 3 to hear Dr. Karl Meyer of the Hooper Foundation, who is to present the subject of *Undulant Fever*.

Doctors Betts and Zumwalt were appointed a committee to arrange postgraduate clinics.

Dr. W. W. Tourtillott was appointed an additional member of the Tulare County Milk Commission.

Dr. J. C. McClure reported on the meeting of the California Medical Association Committee on Investigation of Tax-Supported Hospitals held in Fresno. Preliminary reports were presented at this meeting.

KARL F. WEISS, *Secretary*.

✽

VENTURA COUNTY

The regular monthly meeting of the Ventura County Medical Society was held at the Ventura County Country Club on Tuesday, January 13.

Guests were: Dr. Paul McMaster of Los Angeles, Dr. Allen of Ventura, Doctors Ditto, Paul, and Chier of the County Hospital, and Mr. King.

President Shore introduced Doctor McMaster, who presented a short paper on *Tendon Injuries*. He followed this with a number of interesting, illustrated case reports. A good discussion ensued.

Doctor Coffey called attention to the fact that the Red Cross was organizing various service stations into emergency first-aid stations. Under this plan a list of physicians' names were to be placed on a placard by the telephone. Since all members' names were not to be posted, and the fact that the attendant would probably pick the physician, makes the plan unfair. Doctor Barker moved that the County Medical Society prohibit the use of its members' names on such placards. The motion was seconded by Doctor Clark, and carried. The question was raised as to the posting of names on industrial and insurance panels. The above motion was amended, so these panels are not included.

The secretary was instructed to look into the matter of compulsory automobile insurance to cover medical and hospital bills following accidents.

Doctor Homer asked the will of the Society in regard to holding a clinic day. After some discussion it was decided to delay any further discussion until a later meeting.

A motion was made by Doctor Hendricks, seconded by Doctor Clark, that we have dinner meetings and that they be held at the Ventura County Country Club. Carried.

Program Committee: For February, Doctors Hendricks and Barker. For March, Doctors Grant Clark and Strong.

Tentative programs are to be presented one month in advance and to be approved by the members of the Society.

A. A. MORRISON, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (64)

Alameda County.—George B. Brown, Karl J. Deissler, Woodburn K. Lamb, Lester B. Lawrence, Philip J. Lipsett, Thomas C. McCleave, Jr., Jany Taylor Paxson.

Butte County.—John Albert, Frank C. Reynolds.

Contra Costa County.—George C. Kelso, Henry D. Neufeld.

Fresno County.—C. P. Doane.

Imperial County.—Harry P. Findley, Warren F. Fox, Donald B. Marchus, John A. Wallace.

Kings County.—J. P. Young.

Lassen-Plumas County.—W. H. Pate.

Los Angeles County.—Wilbur A. Beckett, Arthur A. Gould, Paul F. Guernsey, A. M. McCausland, John C. McDermott, Isaac Y. Olch, Louis Phillips, B. G. Pinkerton, William Francis Quinn, Aaron Roth, Yudell K. Slocum, John O. Vaughn.

Marin County.—R. Weseman.

Merced County.—Joseph W. Dasset, Charles L. Garvin, Edith L. Mythalier.

Napa County.—Alfred Oliver.

Sacramento County.—Jiro Muramoto, Gandolfo Prisinano, Ralph C. Teall, Joseph E. Yates.

San Bernardino County.—Clarence E. Dixon, Robert G. Williamson.

San Diego County.—Floyd M. Bond, Michael J. Hogan, Bernard E. McGovern.

San Francisco County.—Daniel E. F. Easton, Kenneth D. Gardner, William H. Heinzman, Phillips Johnson, August Spitalny.

San Joaquin County.—Alexandre Barron, Gilbert Den Dulk, Marion M. Green, G. W. Hooker, L. J. Peterson.

San Mateo County.—William W. Mills, Rowland R. Moulton.

Santa Barbara County.—Russell Gates.

Santa Clara County.—Pierce C. Barrette, David N. Roberg, Jack Vogelmann.

Solano County.—M. Elizabeth Jenkins.

Ventura County.—Harry E. Barker.

Yolo-Colusa-Glenn County.—Charles W. Lund, Henry G. Potter.

Transferred (6)

Richard C. Burkett, from Los Angeles County to Napa County.

Albert P. Krueger, from San Francisco County to Alameda County.

Marie B. K. Kuhlman, from Alameda County to Merced County.

Erving L. Robers, from Orange County to San Bernardino County.

Ralph M. Smith, from Los Angeles County to Riverside County.

Thomas F. Thorp, from Humboldt County to San Joaquin County.

Resigned (1)

John F. Rickard, from San Francisco County.

In Memoriam

Collings, Harry Andrews. Died at St. Helena, March 8, 1936, age 56. Graduate of College of Physicians and Surgeons, San Francisco, 1911, and licensed in California the same year. Doctor Collings was a member of the Lassen-Plumas County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✦

Martin, Walter D. Died at Los Angeles, February 25, 1936, age 54. Graduate of the State College of Physicians and Surgeons, Indianapolis, 1907. Licensed in California in 1926. Doctor Martin was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Matsumura, Kiyoshi. Died at San Francisco, January 5, 1936, age 48. Graduate of the University of California Medical School, San Francisco, 1928. Licensed in California in 1929. Doctor Matsumura was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✦

Merrill, Edward Roscoe. Died at Santa Barbara, February 13, 1936, age 79. Graduate of Harvard University Medical School, Boston, 1885. Licensed in California in 1886. Doctor Merrill was a member of the Santa Barbara County Medical Society, the California Medical Association, and the American Medical Association.

✦

O'Donnell, Earl William. Died at Los Angeles, February 16, 1936, age 45. Graduate of the College of Physicians and Surgeons, Los Angeles, 1915, and licensed in California the same year. Doctor O'Donnell was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

✦

Vowinckel, Ferdinand Wilhelm. Died at San Francisco, February 24, 1936, age 75. Graduate of Friedrich-Wilhelms-Universität Medizinische Fakultät, Berlin, 1885. Licensed in California in 1892. Doctor Vowinckel was a member of the Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS†

What Other States Are Doing

The official journals and bulletins of sister state organizations are always perused with interest. From them we seek to glean their activities and remain informed on recorded results. We impart some of their activities singly and collectively.

Economics.—This is the chief item in most states, especially New York, New Jersey, Wisconsin, Minnesota, Michigan, Illinois, and Ohio. Many of these states have been intent on furnishing special literature and debate handbooks to debating teams.

Legislative.—Illinois, Indiana, Ohio, New York, Pennsylvania, New Jersey, Wisconsin, and Minnesota have active legislative committees and apparently are alert to defeat adverse legislation. No special legislation is being promoted. To secure informed legislators is a constant quest.

Postgraduate Education.—Each year reveals an increasing number of state organizations becoming interested in affording postgraduate opportunities for their members—Wisconsin, Michigan, Illinois, Iowa, and the Virginias, are outstanding in their well-organized courses. Michigan, with its recent several million endowments, is quite outstanding in its program.

Public Contact.—New Jersey, Wisconsin, New York, and Indiana reflect sustained programs in the education of the public in regard to public health, medical care, and legislation.

Adequate Care.—District of Columbia apparently heads the states in sponsoring a plan to provide budgeted medical care. New York City is exposing clinic abuses. Sporadic plans, more or less varied, are reported throughout

† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

the country. The Detroit plan has received no recent comment, nor have the Portland or Seattle plans. Doubt exists as to all proposed plans, except the District of Columbia, and therefore opinions are held in abeyance.

Hospital Care.—Little comment has appeared during the past several months on hospital insurance plans. Such plans are approved and in operation in several localities. They include x-ray and laboratory as part of hospital service. California considers them as medical care, therefore they cannot be included in hospital insurance plans. The eastern organizations have apparently overlooked this vital question and silently condone the practice of these branches of medicine by corporations. Truly, "Consistency thou art a jewel."

Committees.—Except for the committees mentioned, most committees are evidencing little activity beyond perfunctory reports. Indiana has an aggressive public relations committee. New York has an active professional and lay grievance committee. Minnesota spends large sums on legislation. New Jersey is effectual in making desired contacts. Texas rides a close herd and overlooks few bets. Illinois has several well-functioning committees. There are periodic meetings of three eastern sea coast state organizations, and some five central states have meetings from time to time to swap experiences. Colorado has evidenced extended activity during the past two years. Iowa accomplished the enactment of a basic science law. There are several southern clinical meetings of several days' duration, but are concerned only with medical questions and discussions. New England States, particularly Massachusetts, are concerned with cult legislation and state institutions. Pennsylvania goes along in an even tenor, but apparently deals well with its state problems.

Solutions.—As yet, no state has advanced any solution or plan for meeting the problem of enabling the individual to obtain medical care by independent action. Dependent individuals continue to be the wards of governmental agencies, and are without ways to regain independence.

General.—The endeavor has been made to transmit an insight to state activities. The endeavor is quite likely to be inaccurate and not a complete reflection. Possibly more action and further reaching results are being secured by states and can be exhibited by those immediately concerned. Their publications, however, give no such extended reports. This leads to the suggestion that possibly the American Medical Association might, to the advantage of state organizations, issue a monthly bulletin summarizing in considerable detail state activities with extended explanatory detail and send such bulletin to executive officers of state organizations. Such a bulletin on the "state of the nation" could be made of considerable value. This comment may be evidence of the glaring need of such a national policy. It could be made of greater value than the weekly and monthly "market letters" that are sent out by investment and business concerns. The suggestion is respectfully made. California stands ready to so report each month.

* * *

San Francisco Fair

Officers and directors of the proposed San Francisco Fair, plans for which are being completed, were contacted and the following letter is indicative of the activity that will be evidenced by this Association department.

SAN FRANCISCO BAY EXPOSITION
817 Financial Center Building
San Francisco, California

January 25, 1936.

Dear Doctor Warnshuis:

I have read your letter of January 24 with a great deal of interest.

While it is too early in our program to speak with any authority on the subject of specific exhibits, it seems inconceivable to consider an international exposition without attention to medical science.

Our immediate problem is a financial one and will probably occupy us for the next eight or ten weeks. As you can appreciate, until we know definitely the amount of money available for the exposition and its sources, it is difficult to reduce a working program to paper. However, within the next few months it is our intention to get at

the matter of exhibits and special buildings, and I shall be extremely grateful for the assistance and cooperation which the California Medical Association will be able to offer. At that time, of course, we shall have a proper department and officials to take charge of such activity, and it would accord me a great pleasure to be able to talk with you personally on the subject and introduce you to those men who will have a more personal direction of such activities.

May I be in touch with you as quickly as we can discuss the matter with reasonable authority?

In appreciation of your kindness and interest, I am

Sincerely yours,

LELAND W. CUTLER, President.

* * *

Expert Medical Testimony

The subject of expert medical testimony is always of interest. A letter on the subject follows:

February 29, 1936.

Dear Doctor Warnshuis:

Your letter of February 15, 1936, containing a quotation from the case of *People vs. Barnes*, 111 Cal. App., pp. 605-610, has been received.

The law with respect to expert testimony consists in reality of several distinct parts, each part having its own rule. Generally speaking, the field referred to as "expert testimony" may be divided into (1) testimony by an expert concerning facts which he has discovered as the result of rendering professional services to one of the litigants in the particular case being tried, and (2) testimony by an expert stating *opinions and conclusions* based upon a set of facts about which the expert has no personal knowledge, but which are stated to him in the form of a hypothetical question by an attorney representing one of the parties.

In those cases which fall within part (1) above, the courts generally hold that a physician or other expert is in no different position than any other witness who has personal knowledge of some material fact in issue. If subpoenaed the physician must attend, and if questioned with respect to facts which are within his personal knowledge, he must answer those questions even though the subject-matter contained in the respective answers may consist of professional matters (excluding the question of privileged communications). For this sort of testimony a physician or other expert is not, as a matter of law, entitled to anything more than the ordinary witness fees. The case from which you have quoted, *People vs. Barnes*, 111 Cal. App. 605, falls within this classification. The expert there involved was a handwriting expert. He had been required to testify concerning facts which had come to his personal knowledge as the result of a previous examination of certain handwriting. He was not paid anything more than the ordinary witness fees. The defendant Barnes, who had been convicted of forgery, contended that the handwriting expert should have been required not only to testify concerning facts which he had learned as the result of a prior investigation, but that he should also have been required, for no extra compensation, to make a further scientific investigation of the documents which were presented to him in court in order that he might form and give an expert opinion as to the author of the respective writings.

The District Court of Appeal held in the portion of the opinion which you quote that experts (the court referred to physicians merely by way of example) are on the same footing as any other witness with respect to matters of fact material to a determination of the case which are within their personal knowledge. With respect to the contention of Barnes, which I outlined above, I will give the court's holding further on in this letter, as it concerns another point. An example of what the District Court of Appeal meant by the statement, "Where a doctor has made a medical examination of a party and has formed an opinion as to the physical conditions suffered, he may be required to testify as to the opinion which he has formed, based upon the facts disclosed by such examination (*Berge vs. Superior Court*, 154 Wash. 144), and this duty is imposed upon the witness notwithstanding that the party calling him has not compensated him for his examination as an expert or other than by the ordinary witness fees received for attendance upon the court" may be given as follows: Suppose that a physician is standing on a street corner waiting for a taxi and witnesses an automobile accident. Suppose, further, that the driver of one of the cars is a regular patient of the physician, is severely injured and is subsequently treated professionally by the physician for the injuries received in the accident witnessed, and suppose that at some later time the

patient commences an action against the driver of the other automobile for damages for the injuries received. At the trial of such case the physician may be required, upon being subpoenaed, to attend the trial and give testimony concerning all of the material facts within his personal knowledge which would include (a) a description of the occurrence of the accident, and (b) a statement with respect to the injuries received by the patient. If the patient refused to pay anything other than the ordinary witness fees, the physician would not be entitled to recover anything.

Before turning to part (2), I should consider a subdivision that more properly belongs under part (1); that is, the situation where an expert is subpoenaed, is not offered anything more than the ordinary witness fee, and is requested, when on the witness stand, to make a scientific investigation of some fact which has not previously been within his knowledge. This is the state of facts which existed in *People vs. Barnes*, and is the second point which I previously deferred. With respect to this point the Court held in *People vs. Barnes* that the expert was not required to undertake the scientific examination requested. The Court said:

"The defendant insists that this witness . . . having been duly subpoenaed and in court he was bound to answer questions propounded to him, this duty being imposed upon the witness by Section 2065 of the Code of Civil Procedure. With this we agree, but the rule does not apply when the defendant has demanded that the witness perform a duty which the statute has not imposed upon him—that he go to the trouble of making a scientific investigation of the documents which were presented to him in order that he might form and give an expert opinion as to the author of the respective writings. This is a duty which a party cannot impose upon an unwilling witness. The rule in this state is found in *People vs. Conte*, 17 Cal. App. 771 (122 Pac. 450, 455, 457), where the court held that the doctor having been sworn as a witness could have been required to answer such pertinent questions as might have been put to him notwithstanding that they might call for expert testimony, but that 'We know of no rule of law which would have authorized the court to compel him to go to the trouble and perhaps some expense of scientifically investigating the cause of the marks on the rock for the purpose of qualifying himself to give expert testimony on that subject.'"

The rule stated in the above quotation has been the law in this state for many years. There is very little possibility that it will be altered. In *Webb vs. Lewald Coal Co.*, the District Court of Appeal in its opinion used some language that might have been construed as overruling the rule of *People vs. Conte*, supra. However, appearing on behalf of the California Medical Association as *amicus curiae*, I wrote a brief in support of the respondent's petition for a hearing by the Superior Court, which resulted in the hearing being granted and a decision by that court which omitted the language used by the District Court of Appeal to which we had objected.

Considering now the problems which arise under part (2), we find that there is a decided division of authority in the various states of the United States and no determinative decision in this state. In the federal courts and in some of the state courts it is held that a physician or other expert cannot be compelled to testify as a witness to matters of opinion which call for the exercise of professional knowledge and skill based upon facts which are not within the personal knowledge of the witness. I quote a portion of the opinion in *Matter of Roelker*, 1 Sprague (U. S.) 276:

"When a person has knowledge of any fact pertinent to an issue to be tried, he may be compelled to attend as a witness. In this all stand upon equal ground. But to compel a person to attend merely because he is accomplished in a particular science, art or profession would subject the same individual to be called upon in every case in which any question in his department of knowledge is to be solved. Thus the most eminent physician might be compelled, merely for the ordinary witness fees, to attend from the remotest part of the district and give his opinion in every trial in which a medical question should arise."

The foregoing quotation sets forth the rule which we urged in *Webb vs. Lewald Coal Company* and which should be the law in this state. The Court, however, did not express any opinion upon the matter. Contrary to the foregoing rule, many state courts have held that a physician or other expert may be compelled to testify to matters of opinion calling for the exercise of professional knowledge and skill even when the facts are not within the personal knowledge of the physician or other expert concerned.

In your letter of February 15, you state that Dr. A. B. Bigler of Chowchilla was subpoenaed and in response to

the subpoena appeared in court and gave testimony. You then ask my opinion with respect to his right to remuneration for such expert testimony. I cannot give you a specific answer, for, as the foregoing sketchy résumé of the law shows, a doctor's right to remuneration in excess of ordinary witness fees depends upon the type of expert testimony which he is called upon to give. If his testimony will come within part (1) above, he has no right to remuneration aside from the ordinary witness fees. If Doctor Bigler was asked to examine or investigate any fact, he could have refused to do so, but if he voluntarily made an examination or investigation he may not recover therefor (*McClenahan vs. Keyes*, 188 Cal. 514). If his testimony should properly be classified under part (2) above, then whether or not he is entitled to extra remuneration has never been decided in this state. I might say, however, that it has been held that if a physician or other expert voluntarily testifies to matters of opinion not based upon facts within his personal knowledge without an express contract for extra remuneration he may not recover in an action of law for his services as an expert witness (*McClenahan vs. Keyes*, supra), the theory announced by the Court being that:

"The witness having attended voluntarily, and having testified, cannot recover extra compensation on the theory that he was an expert witness and that his expert knowledge was involved in his testimony. There was no implied contract for the payment of extra compensation, due to the fact that the respondent was used as a witness."

The problems arising under the general subject of expert testimony are numerous and complex. In my opinion a physician should, before appearing as an expert witness in a case, familiarize himself with the extent and scope of his legal rights for his own self-protection, even if it is necessary to secure the advice of an attorney well versed in the legal problems connected with expert testimony.

Very truly yours,

HARTLEY F. PEART.

* * *

Hospital Insurance

In accordance with the policy of providing members with information, the following correspondence is published:

ASSOCIATED HOSPITAL SERVICE, INC.
Room 341, Whitcomb Hotel
San Francisco

February 24, 1936.

Charles A. Dukes, M. D.
Chairman, Public Relations Committee.

Dear Doctor Dukes:

The "Digest of a Conference" between your committee and representatives of medical specialties, dated February 1, 1936, was discussed at a meeting of the Executive Committee of the Associated Hospital Service, Inc., February 12.

In attendance at our Executive Committee meeting, there were three medical men, representing hospitals and hospital staffs, one representative of hospital trustees, and two hospital executives, all of Class A or approved hospitals.

The secretary of our Executive Committee was directed to communicate with the chairman of the Public Relations Committee pursuant to your offer in paragraph 6, subhead e, our wish to avail ourselves of the advisory services offered, to the end that this corporation may obtain definite information regarding certain questions which now obstruct the inauguration of hospital service insurance plans, which have been under discussion throughout the State for a little over two years.

May we ask that the questions set forth on the attached sheet be answered by the proper authority in the California Medical Association?

Very truly yours,

(Signed) V. W. OLNEY,
Secretary, Executive Committee, Associated
Hospital Services, Inc.

* * *

[Appended to letter of February 24, addressed to the chairman of the Public Relations Committee, California Medical Association.]

1. Will you kindly advise us whether the answers given by your committee will have the authority of the California Medical Association and the House of Delegates?

2. In your letter of February 4 (Digest of Conference) the conclusions of your committee were expressed in general terms ("practice of medicine by hospitals," "technical and professional division," and "hospital care and medical

care"). May we be favored with detailed information of what these terms mean, as to the specific acts or services in which hospitals may engage, in the furnishing of hospital service insurance?

3. As to the separation of medical care from hospital care, may we ask for a definition of separation of each, as they are given in hospitals?

(a) Does the California Medical Association hold that nursing care, under the direction of the patient's physician, is medical care or hospital care? If nursing care is held to be medical care, may the hospital charge for such care, and may such care be furnished in hospital contracts?

(b) Does anesthetic service, furnished by a technical anesthetist, constitute medical care when under the direction of a physician? If considered medical care, may it be furnished in hospital contracts?

(c) Does the service of an operating nurse constitute medical care, when assisting at an operation? If such service is considered medical care, may it be furnished in hospital contracts?

(d) Does the service of an operating-room nurse in preparing for an operation constitute medical care or hospital care? May such service be furnished in hospital contracts?

(e) Does the service of a laboratory technician constitute medical or hospital care when making urine and blood tests? May such service be furnished in hospital contracts?

(f) Does the service of a technician in making x-ray pictures and in giving barium enemata constitute hospital or medical care? May such service be furnished in hospital contracts when given under the direction of a doctor?

4. In view of the fact that the practice of medicine is divided into technical and professional parts (both under the professional control of the patient's doctor) in surgical operating rooms, wards and rooms, and in view of the fact that this division is ethical and legal, may we ask for a statement of specific objections to the same division into technical and professional parts in the work done in x-ray departments and pathological laboratories:

(a) From the standpoint of practice of medicine.

(b) From the financial standpoint.

5. Our proposed contracts, drawn for the consideration of medical men, excludes the sale of professional service of medical men. By professional service, we mean diagnosis and treatment furnished by medical men themselves. We understand, further, that such diagnostic and treatment services cannot be rendered by technicians, nurses, or unlicensed persons.

May we ask, then, why the furnishing of the x-ray technician's service or the laboratory technician's service is disapproved when the service of nurses and other technical assistance in other departments is not disapproved?

CALIFORNIA MEDICAL ASSOCIATION

Four Fifty Sutter

San Francisco

February 29, 1936.

Dear Mr. Olney:

This will acknowledge receipt of your communication of February 24, to which were attached five questions with subdivisions upon which you solicited answers from the Department of Public Relations of the California Medical Association for the information and guidance of your organization, and to which the following is made:

1. The policies that have been announced and published by the Department of Public Relations in regard to corporations desirous of issuing hospital insurance protection, have been approved by the Council of the California Medical Association. The Council is empowered to act for the Association. At the coming meeting of our Association in Coronado in May, a report will be submitted to the House of Delegates. If the House of Delegates approves the policies and principles formulated by the Department of Public Relations, and approved by the Council, then, naturally, those principles will have the authority and endorsement of the California Medical Association.

2. The committee holds that "hospital care" consists primarily of providing the patient a bed in a ward, a semi-private room, or a private room; the diet that has been prescribed by the attending physician and those other common services directed to the comfort of the patient, including a resident staff perhaps who may assist the attending physician in the care of his patient. Nursing care which can be had either in the home or the hospital may be provided in the hospital on a "general duty" basis or pupils in a training school may be used under supervision. This care or service gives all of the care that a nurse is

permitted to do, and is given under the explicit directions of the patient's attending physician.

Medical care is defined as the diagnosis or treatment, or both, of any mental or physical ailment of a human being and includes all of these procedures, diagnostic or therapeutic, that require for their performance the possession of a valid and unrevoked license to practice medicine in the State of California. Many procedures in clinical pathology and roentgenology require this, particularly in obtaining specimens and preparing patients for proper examination, and the Committee on Public Relations and the Council have not seen fit to begin a separation of so-called technical procedures. All of them lead to diagnosis and are considered to be the practice of medicine.

The terms "technical and professional services" are not the choice of the Committee on Public Relations, but came into prominence, we believe, as a result of the Cleveland hospitals' attempts to include medical service in their contracts.

3(a). Nursing care, under the direction of a patient's physician, in a hospital or in the patient's home, is nursing care and is given by nurses either graduates of or pupils in, nursing training schools, and the State of California has set up standards for the education and registration of these nurses. They are not entitled to prescribe for or treat anyone except under the orders and responsibility of a licensed physician and surgeon. The State of California and the California Medical Association have not expressed any opinion as to who shall remunerate them for their services, which may be included in a hospital contract.

(b) Anesthetic service is the practice of medicine, in the opinion of the Committee and of the Council, and will continue to be so unless decided otherwise by the Supreme Court of California. The *Chalmers-Francis et al. vs. Dagmar Nelson and St. Vincent's Hospital* case is now on appeal in the Appellate Court of the State. Being the practice of medicine, it cannot be furnished in hospital contracts.

(c) What do you mean by assisting? If she is actually assisting the operating surgeon, she is doing nothing except that which he tells her to do, and she is under his direct supervision at all times. He is responsible, and can have anyone he wants, trained or untrained, if he is willing to take the risk. If the nurse is passing instruments, towels, sponges, and catgut, in what degree is she diagnosing or treating the patient's condition? We state that, in the first instance, the care is neither medical, hospital, or nursing. She is only assisting the surgeon who desires her so to do. In the second instance, again it is nursing care, perhaps, or hospital—certainly not medical. Both can be included in hospital contracts.

(d) The service of an operating-room nurse in preparing for an operation is certainly not medical care. All she does is "set up," as she is told to do, a table or chair, sterile instruments, towels, sponges, dressings, etc., and she may prepare the operative field under the direction of the operating surgeon. This service may be furnished in hospital contracts.

(e) It is held that clinical pathology is the practice of medicine and that, as set forth in (2), such service cannot be furnished in hospital contracts.

(f) The taking of x-ray pictures for diagnosis is considered to be the practice of medicine. The contention that these pictures will be taken under the direction of the patient's own physician is begging the question, as the hospitals as well as the physicians know that the physicians know nothing of dosage and exposure and of the substances used to obtain pictures. There are no state-approved schools for technicians, who do not occupy in any way the same status that a registered nurse does.

We hold that the application of a dangerous physical agent like the roentgen ray to the human body, either for diagnosis or treatment, is the practice of medicine, as is the administration of barium by mouth or in enemata, and the various substances given by mouth or intravenously to outline certain viscera or ducts. Practically, without casuistry, this would all be in the hands of lay persons with no standing at law and no specific standards of training whatsoever.

We would call your attention to the fact that the last legislature passed a bill designed ultimately to place the practice of roentgenology in the hands of the medical profession. This bill was the victim of a pocket veto by our Governor.

Our answer to question 2 further sets forth reasons why this type of medical service cannot be furnished in hospital contracts.

4. In view of the fact that the practice of medicine is not divided into technical and professional parts in the surgical operating rooms, wards, and rooms, and in view of the fact that, there being no division, except by the hos-

pitals for purposes of this argument, it cannot be said to be legal and ethical, and there is no reason to state specific objections to the same division of clinical pathology and roentgenology.

(a) The objections to the division of roentgenology and clinical pathology are all set forth in (2) and (3-e) as far as the practice of medicine is concerned.

(b) From the financial standpoint, we are not interested except in so far as the law states that corporations and lay persons cannot sell medical service.

5. You will respect the reservation that we make when we say that we prefer our opinion as to whether professional service is excluded from your contracts, copies of which we have not seen. The answer to the question in the last paragraph is wholly contained in the preceding questions, and an answer would only require a repetition of them.

Further information and answer may be obtained from the principles and resolutions adopted by the Department of Public Relations, as published in the December, January, February, and March issues of CALIFORNIA AND WESTERN MEDICINE.

The Committee on Public Relations trusts that it has answered, as satisfactorily as possible, the questions upon which you desired information.

The committee takes this as a further opportunity of reaffirming its position in regard to these controversial questions, and also assures the hospitals who are members of your association that the committee will be very willing to discuss these questions and problems at any time in order that a common understanding may be obtained and mutual interest served. To that end, we trust that you will feel free to command us whenever you feel this committee can be of service to you. In view of the policy of imparting information, it is proposed to publish your letter and this letter in the April issue of CALIFORNIA AND WESTERN MEDICINE in order that our members remain informed.

By direction of:

C. A. DUKES,
Chairman, Committee of Public Relations of the
California Medical Association.

By F. C. WARNSHUIS,
Director of Public Relations.

THE WOMEN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. THOMAS J. CLARK.....President
MRS. ELMER BELT.....Editor and Chairman of Publicity

State Auxiliary News

The Annual Session at Coronado.—The Woman's Auxiliary to the California Medical Association meets for its seventh annual convention May 25 to 28 this year at the Hotel Del Coronado. This delightful resort is never more attractive than in spring, and recent innovations have added gaiety and pleasure to the enjoyment of its sports of the surf, sand and sun. Under the chairmanship of Mrs. Elliott G. Colby the entire membership of the San Diego Auxiliary has been working and planning to insure a happily blended combination of serious interest and merry recreation. All who attended the last meeting at Coronado about six years ago will well remember how perfectly every detail had been dealt with by the San Diego hostesses. The complete program of the Auxiliary is published elsewhere in this issue, and your inspection of its varied appeal is invited.

Our state president, Mrs. Thomas J. Clark, has placed special emphasis on simplifying the necessary organization

† As county auxiliaries of the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Elmer Belt, chairman of the Publicity and Publications Committee, 2200 Live Oak Drive, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Belt and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

meetings so that ample time will be left for the social functions and for individual plans. The business sessions will be held in the Yacht Club House, which promises comfortable space and quiet seclusion for the speedy dispatch of the work to be done. Mrs. Andrew J. Thornton of San Diego, the president-elect of the State Auxiliary, will attend the national convention of the American Medical Association Auxiliary, to be held in Kansas City this year, and preceding our state convention by just two weeks. She will return from it with all the information and the inspiration of the work being done by the Auxiliary organizations throughout the nation, and will thus bring us the opportunity for an excellent start to the new year's work and enable us to form plans in line with the national program. It is hoped the attendance at Coronado will set a new record in the California Auxiliary annals.

County Auxiliary Reports

Alameda County.—The Woman's Auxiliary to the Alameda County Medical Association sponsored two events during the month of February. The first was a delightful luncheon in honor of the president of the Woman's Auxiliary to the American Medical Association, Mrs. Rogers N. Herbert of Nashville, Tennessee. Mrs. Thomas J. Clark of Oakland, our state president, acted as hostess, assisted by members of the state board and by Mrs. Robert T. Sutherland, the Alameda County president. Mrs. Herbert gave a most interesting talk on the growth and the work of the Auxiliary.

The regular meeting of the Alameda Auxiliary took the form of a dessert bridge party on February 21 at the College Women's Club in Berkeley. The meeting was called to order by the president, Mrs. Sutherland, and after a short business session Mrs. Clarence Page sang a group of songs. She was accompanied by Mrs. Hayward Thomas. The remainder of the afternoon was spent at cards. Mrs. Lloyd Kindall was chairman of arrangements for the occasion, and was assisted in receiving by the members of the county board, who appeared in Colonial costumes. The party proved a complete success, in spite of the rain. The proceeds from it will be used for the benefit of the Public Health Institute to be held in the fall.

LAURA S. HENRY, Publicity Chairman.

Fresno County.—The Woman's Auxiliary to the Fresno County Medical Society completed its organization in two meetings: one on December 3, held under the supervision of Mrs. William H. Sargent of Oakland, State Chairman of Membership and Organization, when plans for the new branch were begun; and a second meeting on January 7, when the constitution was read and adopted and the officers for the coming year were elected. Mrs. Guy Manson was chosen president; Mrs. Walter Weise, vice-president; Mrs. Otto Diederich, secretary; Mrs. A. E. Anderson, treasurer; and Mrs. Charles Ingram, parliamentarian.

On February 4 the group met again, and Dr. A. E. Anderson spoke on *Legislation of Interest to Us* and suggested various ways in which the Auxiliary might be of service. Some very interesting African travel pictures were also shown at this time.

MILDRED DIEDERICH, Secretary.

Los Angeles County.—It was a day to honor presidents—past, present, and elect; national, state, and county—and to this end a beautiful tea was held at the Medical Association Building on February 10. We feel justified in a natural pride in our leaders in that they are all such charming people, not at all afflicted with the official mannerisms popularly misconceived to be characteristic of the typical clubwoman. Mrs. John V. Barrow, the Los Angeles County president, introduced the national president, Mrs. Rogers N. Herbert of Nashville, Tennessee, who described her journey from her home in Tennessee northward and westward, through heavy snows and sub-zero weather, being warmed, however, by the friendship and hospitality extended her by the various auxiliary groups along the way. Mrs. Herbert went on to say that the public is either informed, uninformed, or misinformed,

and that it behooves the doctor's wife to be informed in order to sow the seeds of knowledge where they may grow and ripen rather than allow the weeds of untruth to flourish. At the conclusion of Mrs. Herbert's remarks, tea was served on tables decorated with peach blossoms. Included among the guests of honor were: Mrs. Thomas J. Clark of Oakland, the state president; Mrs. Andrew J. Thornton of San Diego, the president-elect; Mrs. James F. Percy of Los Angeles, who has served as Auxiliary president for national, state, and county organizations; Mrs. Philip Schuyler Doane of Pasadena and Mrs. William H. Sargent of Oakland, both past presidents of the California Auxiliary.

It was unfortunate that the regular meeting of the Auxiliary which was to have featured an outdoor luncheon, sponsored by the Arden Farms at their model dairy in El Monte, had to be canceled due to rain. The invitation will be renewed at some future date and we shall have the privilege of inspecting one of the sources of our milk supply, a matter so vital to the health of the community.

Representatives from the Auxiliary will attend the Women's Civic Conference to be held on March 28 at the University of Southern California, a table of twenty having been reserved for the noon meeting. Mrs. John V. Barrow is a member of the Conference board, and has taken an active part in the arrangements and preparation of the program.

MRS. HAROLD E. CROWE, *Corresponding Secretary.*

Orange County.—The March meeting of the Auxiliary, held on the third of the month at the home of Mrs. Dexter Ball in Santa Ana, brought to the members a discussion by Dr. Ray C. Green of Fullerton of *The Comparative Educational Qualifications for the Different Schools of the Practice of the Healing Arts*. He gave an enlightening description of the origin of the various cults, of the meager amount of scientific training necessary for a degree in each, and the large part that superstition plays in their practice. He emphasized the need of the passage of a basic science law in California, the happy hunting ground *par excellence* for all the cults.

Mrs. Ray C. Green, our president, gave the highlights of the February State Board meeting held in Los Angeles, and spoke of the tea honoring Mrs. Roger Herbert, president of the National Auxiliary, to which Los Angeles County Auxiliary had kindly invited our members. Mrs. K. H. Sutherland was appointed chairman of the newly organized Welfare Committee. Mesdames E. L. Russel, John Ball, and G. W. Olson comprise the Nominating Committee selected to report at the April meeting. The Auxiliary voted to become an associate member of the Public Health League of California and to cooperate with it in every way possible. Hostesses who aided Mrs. Ball in serving tea during the ensuing social hour were: Mesdames E. F. Bruning, P. B. Gillespie, Newell Moore, G. I. Sellon, and Harry Zaiser.

JESSIE Q. RAITT, *Publicity Chairman.*

Sacramento County.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held on January 28 at the home of Mrs. C. B. McKee, with Mrs. Frederick N. Scatena, the president, presiding. The president announced that the Board had appointed Mrs. E. T. Rulison as chairman of the Nominating Committee. Mrs. Frank Krull was then elected to serve with her, and these two were instructed to choose a third member for the committee. Mrs. Scatena then invited all members of the Auxiliary to a reception to be held February 5 at the Claremont Country Club in honor of our national president, Mrs. Rogers N. Herbert of Tennessee. Mrs. H. M. Kanner then presented Mrs. Laurence Wilson, who gave a most entertaining and informative talk on English and Irish women. Mrs. McKee, assisted by Mesdames Frank Krull, W. W. Cress, A. A. Stem, W. J. Teeney, J. D. Lawson, and George Walsh, served dainty refreshments during the social hour which followed.

SARAH L. BRENDEN, *Corresponding Secretary.*

NEVADA STATE MEDICAL ASSOCIATION

R. O. SCHOFIELD, Boulder City.....President
C. E. SECOR, Elko.....President-Elect
HARRY W. SAWYER, Fallon.....First Vice-President
W. H. FROLICH, East Ely.....Second Vice-President
HORACE J. BROWN, Reno.....
.....Secretary-Treasurer and Associate Editor for Nevada

COMPONENT COUNTY MEDICAL SOCIETIES

CLARK COUNTY

The regular monthly meeting of the Clark County Medical Society was held February 29 at the Six Companies' Hospital at Boulder City. Dr. R. O. Schofield, president of the Nevada State Medical Association and chief surgeon of the Six Companies' Hospital, was the host at a splendid dinner given for the members of the local society and for a group of visiting physicians.

The dinner was followed by a discussion, with a motion picture study of amebiasis dysenteriae and a lantern slide study of the kidney structure and function by Doctors John Barrow and A. E. Belt, respectively, of Los Angeles. Doctor Barrow's discussion stressed the importance of the true diagnosis of amebiasis dysenteriae and the differentiation between this organism and *Ameba coli*. He also stressed the great significance of the correct dosage and method of administration of emetin in the treatment of amebiasis and liver abscess due to this organism.

Doctor Belt briefly and concisely pointed out the recent work done on the kidney filtration and absorption theory, together with a comparative study of the specific gravity fixation tests, the urea, non-protein nitrogen and phenol-sulphonaphthalein kidney function tests and their significance. Both discussions were presented forcefully and to the point.

In addition to the members of the Society, several guests from Los Angeles and Boulder City were present. Doctor Schofield's dinner was greatly enjoyed and appreciated by those present.

A. BLINSTRUB, *Secretary.*

Malpractice Liability of Physicians for Anesthetizing a Minor Without Consent of Parents.—The plaintiff, twenty years of age, injured his ankle. He was taken to the defendant, a physician, for treatment, neither parent accompanying him. Without obtaining the consent of either parent, but with the minor's consent, the defendant anesthetized him with ether and proceeded to "set the ankle" and apply a cast. The plaintiff and his father subsequently sued the defendant in the city court of New York, Bronx County, to recover damages for alleged malpractice and for an assault predicated on the theory that the defendant anesthetized the plaintiff without obtaining the consent of his parents.

Where there is an emergency which endangers the life or health of a patient, or where suffering may be alleviated, said the court, it is a physician's duty to do that which the occasion demands within the usual and customary practice among physicians in the same locality. To hold that a physician must wait until he has obtained the consent of a minor's parents, who may not be available, before administering an anesthetic or before giving to an injured minor the benefit of his skill and learning to alleviate pain and suffering, might result in the loss of many lives and in much pain and suffering that might otherwise be prevented. Under the circumstances in the present case, the court thought that it would be altogether too harsh a rule to hold the defendant liable because he did not obtain the consent of the father to the administration of the anesthetic. Since the defendant was confronted with an emergency, and since he obtained the consent of his patient, the consent of the father was not necessary. The court could find no evidence of malpractice and consequently dismissed the complaint. (*Sullivan vs. Montgomery* (N. Y.), 279 N. Y. S. 575).—*Medico-Legal News Item.*

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Kansas City, Missouri, May 11-15, 1936. Olin West, M. D., 535 North Dearborn Street, Chicago, Secretary.

American Surgical Association, Chicago, May 7-9, 1936. Vernon C. David, M. D., 59 East Madison Street, Chicago, Secretary.

Arizona State Medical Association, Nogales, April 23-25, 1936. D. F. Harbridge, M. D., 15 East Monroe Street, Phoenix, Secretary.

California Medical Association, Coronado, May 25-28, 1936. Frederick C. Warnshuis, M. D., 450 Sutter Street, San Francisco, Secretary.

California Tuberculosis Association, Sacramento, April 2-4, 1936. Mr. W. F. Higby, 45 Second Street, San Francisco, Executive Secretary.

National Tuberculosis Association, New Orleans, April 22-25, 1936. Charles J. Hatfield, M. D., Seventh and Lombard streets, Philadelphia, Secretary.

New Mexico Medical Society, Carlsbad, May 6-8, 1936. L. B. Cohenour, M. D., 219 West Central Avenue, Albuquerque, Secretary.

Medical Broadcasts*

The *American Medical Association* broadcasts over WEAF, the red network instead of the blue, as formerly, and certain additional stations of the National Broadcasting Company at 5 p. m., eastern standard time (4 p. m. central standard time, 3 p. m. mountain time, 2 p. m. Pacific time), each Tuesday, presenting a dramatized program with incidental music under the general theme of "Medical Emergencies and How They Are Met." The title of the program is "Your Health." The program is recognizable by a musical salutation through which the voice of the announcer offers a toast: "Ladies and Gentlemen, Your Health!" The theme of the program is repeated each week in the opening announcement, which informs the listener that the same medical knowledge and the same doctors that are mobilized for the meeting of grave medical emergencies are available in every community, day and night, for the promotion of the health of the people. Each program will include a brief talk dealing with the central theme of the individual broadcast.

Pacific Network—The stations on the Pacific network are KGO KPO KFI KGW KOMO KHQ KFSD KTKR.

San Francisco County Medical Society.—The radio broadcast program for the San Francisco County Medical Society for the month of April is as follows:

Tuesday, April 7—KYA, 6 p. m.

Tuesday, April 14—KYA, 6 p. m.

Tuesday, April 21—KYA, 6 p. m.

Tuesday, April 28—KYA, 6 p. m.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of April is as follows:

Saturday, April 4—KFI, 9 a. m. Subject: The Road of Health.

Saturday, April 4—KFAC, 10:15 a. m. Subject: Your Doctor and You.

*County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Tuesday, April 7—KECA, 11:15 a. m. Subject: The Road of Health.

Saturday, April 11—KFI, 9 a. m. Subject: The Road of Health.

Saturday, April 11—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, April 21—KECA, 11:15 a. m. Subject: The Road of Health.

Saturday, April 18—KFI, 9 a. m. Subject: The Road of Health.

Saturday, April 18—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, April 21—KECA, 11:15 a. m. Subject: The Road of Health.

Saturday, April 25—KFI, 9 a. m. Subject: The Road of Health.

Saturday, April 25—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, April 28—KECA, 11:15 a. m. Subject: The Road of Health.

Efficiency in Death Registration.—The United States Bureau of the Census, which receives copies of all birth and death certificates that are filed in California, has advised the Division of Vital Statistics that only 1.03 per cent of death certificates were queried in 1934 because of indefinite statements relative to causes of death. That bureau is most meticulous in ascertaining the true cause of death in order that its statistical tabulations may be reliable. California physicians through their efficient reporting of deaths have enabled this state to make a commendable record. With the birth certificates only one-half of one per cent of those from California were queried in 1934. It is interesting to note that Massachusetts is the only state that excelled California last year in making this enviable record in the proper filing of both birth and death certificates.

How Wide Are You?—The Right Answer Determines Weight.—Folks who have been inclined either to diet or to increase their food intake in order to achieve a certain body weight determined by height and age tables, may now take advantage of a new process developed by medical science which gives them a much wider weight range. The process, which is announced by Dr. Helen B. Pryor, research associate in the Institute of Child Welfare, University of California, discards sole height and age qualifications in favor of the bi-iliac diameter or the measurement at the crest of the hip bones.

The determination was reached in a study of two hundred football candidates at Stanford University, who averaged fifteen pounds overweight, as determined by the old standard tables and several hundred students of both sexes in California and Stanford whose bi-iliac diameter showed that at least some of them were worrying far too much about their weight problems. It was found that many children and grown-ups as well were either underweight or overweight, according to the old standards, because of existing bone structure or other factors which had no bearing on their health. In particular, many properly nourished and perfectly healthy children appeared to be underweight because they had been judged by such standards.

The new standards have been found useful in determining the nutritional needs of the individual, and in placing the proper evaluation upon the dictates of fashion and of food and diet fads.

As an example, Doctor Pryor gives a seventeen-year-old boy 69 inches tall. If his bi-iliac diameter is 26.4 centimeters, his appropriate weight should be 141 pounds. If the bi-iliac diameter is 30.4 centimeters, he should weigh 161 pounds. A number of tables have been prepared to show how the new standards should apply to both adults and children.

Honor to Dr. Edward Jackson, Dean of American Ophthalmologists.—A recent letter from the Jackson Memorial Committee of the Pacific Coast Oto-Ophthalmological Society gives the following information:

"Dr. Edward Jackson passes the eightieth anniversary of his birth on March 30, this year, and some of us felt we would like to have the Pacific Coast members present him with a token of our friendship and esteem.

"We, therefore, enclose this card. Will you inscribe hereon your signature, with or without a short sentiment, and return at the earliest possible date.

"Reproductions of these signatures and sentiments will be engrossed on the parchment, bound into an elegant volume, and presented to Doctor Jackson at the meeting of the Pacific Coast Oto-Ophthalmological Society in Del Monte."

California Medical Association Cancer Commission Studies.—J. W. Stacey, Inc., 236 Flood Building, San Francisco, has announced:

"We are just publishing the studies of the Cancer Commission Committee of the California Medical Association in a very attractive booklet, and we feel you should have copies for permanent record, and perhaps also for distribution. The price of the book is 75 cents. If you desire additional copies for distribution, the following discounts will be given on quantities:

25 to 100 copies, 20 per cent
100 to 500 copies, 25 per cent
500 to 1000 copies, 33½ per cent
1000 copies and over, 40 per cent

"We shall be glad to have your immediate order, as the call will be very large, and the edition is somewhat limited."

Sea Glowworm Is Carrier of Deadly Mussel Poisoning.—The organism which accounts in large part for the beautiful and spectacular displays of phosphorescence in the sea off Southern California and elsewhere, has been found by the University of California to be one of the quickest acting destroyers of human life yet discovered, the producer of the poisonous condition in mussels. This protozoa, technically known as *Gonyaulax*, of which there are many species, has been definitely identified as such poison source in studies conducted by Professor Charles A. Kofoed, chairman of the department of zoology of the University, and W. Forest Whedon of the Hooper Foundation, a part of the University's Medical School. The poison was actually extracted from the organism by Dr. H. Sommer, assistant professor of research medicine in the foundation. The work was carried on under the auspices of the James K. Moffit fund.

According to Doctor Kofoed, the organism caused the tremendous luminous display in the ocean off Southern California in 1906, during which hundreds of tons of dead bottom-living specimens of sea life were cast up on the beaches. The pelagic or surface ocean fish, on the other hand, avoid the luminous areas and the deadly protozoa generally, and thus avoid possible contamination. The mussel, however, feeds on the protozoa, and one type of common shore crustacean is also a host. Transferred to humans the poison causes a quick paralysis and a high mortality. There is no known remedy.

Mussel poisoning has been known at a number of points throughout the world for many years, but until Doctor Kofoed placed the *Gonyaulax* organism under suspicion several years ago, the source of the poison was unknown. His suspicions were finally confirmed in studies, just completed, of protozoa taken in the ocean waters off San Francisco.

The deadly organism appears coincident with the period of greatest poisoning, but such appearances are irregular, and the volume fluctuates widely. It has been taken off San Francisco, Pescadero, Half Moon Bay, Montara, Wright's Beach, near the mouth of Russian River, and Crescent City, California, and Brookings, Port Orford and North Bend, Oregon.

The appearance of the poison and its high potency has caused a series of drastic orders against the mussel as food in certain months of the year. Before these orders became fully effective many deaths resulted. The present identification of the poison agent now makes it possible for health authorities to issue timely warnings when the protozoa appears at any point under observation.

Dr. Robert A. Peers Nominated as a Delegate to the National Republican Convention.—Recent press dispatches included the name of Dr. Robert A. Peers in the list of nominees for delegates to attend the national convention at Cleveland, at which the nominee of the Republican Party for the presidency of the United States will be elected.

Stanley P. Black Memorial Lecture.—The Stanley P. Black Memorial Lecture for the year 1936 was held in the Stanley P. Black Memorial Hall, 65 North Madison Avenue, Pasadena, on Tuesday, March 24, at 8:15 p. m. The subject was "The Evolution of Our Concepts of the Nature and Causation of Disease," the guest speaker being Dr. Frederick P. Gay, professor of bacteriology, Columbia University College of Physicians and Surgeons.

American Medical Association Committee at Medical School.—A survey of the University of California Medical School has just been completed by the American Medical Association, in keeping with the practice of the Association to inspect every school within its jurisdiction at intervals. The inspection committee was composed of Major-General N. W. Ireland, U. S. A., retired, former surgeon-general of the United States Army, and Dr. H. G. Weiskotten, dean of the School of Medicine of the University of Syracuse and director of the hospital of that institution. The committee spent two days in its examination of the school.

American Association on Mental Deficiency.—The American Association on Mental Deficiency, composed of some five hundred educators, psychologists, sociologists, and psychiatrists, is holding its sixtieth annual meeting at the Hotel Jefferson, St. Louis, Missouri, on May 1, 2, 3 and 4. The Friday sessions will be devoted to general and sociologic aspects of mental deficiency; the Saturday sessions to psychologic and educational topics, with special stress on educational disabilities. The Monday sessions will be given over to research activities, medical aspects and administrative problems in mental deficiency.

Some of the speakers are: Popenoe on "Sterilization"; Goddard on "Social Security"; Hinks on "A National Program"; Kirkbride on "Public Welfare"; Hackbusch on "Social Service"; Vanuxem on "Education"; Berry on "Teaching Techniques"; Humphreys on "Research Problems"; and many others. Everyone interested in the mentally defective or retarded child is cordially invited to attend these sessions. The complete program may be obtained from the secretary, Dr. Graves B. Smith, Godfrey, Illinois.

Rockefeller Foundation Wants Influenza Research Material.—A request is made for assistance in influenza research by the International Health Division of the Rockefeller Foundation. Doctor Ferrell writes:

"We should appreciate it, if you would notify Dr. J. H. Bauer, Rockefeller Institute, York Avenue and Sixty-sixth Street, New York City, by collect telegram or fast mail of the occurrence of any epidemic of influenza in your jurisdiction. Any particulars as to number of cases, clinical characteristics, etc., that you can also give would be helpful.

"If an extensive outbreak should occur, it may be found advisable to send an investigator from the Division's Laboratories to study the disease first-hand and to collect material to be studied. In small outbreaks, or when a member of the staff cannot be sent, your coöperation in obtaining material from patients and in having it forwarded to our laboratories will be sincerely appreciated.

"Upon receipt of notice of an outbreak Doctor Bauer will gladly furnish suitable containers, already sterilized, together with detailed instructions for the collection and shipment of the material desired for study. He will also furnish blank forms for recording information regarding the patients."

International Union Against Tuberculosis: Meets in Lisbon in September.—The tenth conference of the International Union Against Tuberculosis will meet in Lisbon, Portugal, September 7-10, 1936, under the chairmanship of Prof. Lopo de Carvalho, president-elect of the Union. The biologic subject, "Radiologic Aspects of the Pulmonary Hilum and Their Interpretation," will be presented by Prof. Lopo de Carvalho. Among the ten countries to take part in the formal discussion, the United States will be represented by Dr. Henry C. Sweany, Medical Director of Research of the Chicago Municipal Tuberculosis Sanitarium. The report on the clinical subject, "Primary Tuberculous Infection in the Adolescent and the Adult," will be given by Dr. Olaf Scheel of Norway, and Dr. Robert E. Plunkett, Director of the Division of Tuberculosis, New York State Department of Health, will represent the United States in the discussion. The opening report on the social subject, "The Open Case of Tuberculosis in Relation to Family and Domestic Associates," will be presented jointly by Dr. Charles J. Hatfield, Director of Henry Phipps Institute, Philadelphia, Pennsylvania, and Dr. D. A. Powell, representing Great Britain. The Organization Committee of the conference has secured reductions in hotel prices and railroad fares. It has also prepared an attractive program of receptions and excursions to enable members of the conference to visit the chief anti-tuberculosis institutions of Portugal and, in addition, to see some of the most picturesque scenery of the country. Members of the Union are invited to take part in the conference without payment of a fee. Other persons may participate as "members of the conference," and application should be made through the National Tuberculosis Association, 50 West Fifth Street, New York. Plans for a special party to the conference may also be secured by writing to the Association.

LETTERS

Concerning federal survey of chronic diseases.

TREASURY DEPARTMENT
UNITED STATES
PUBLIC HEALTH SERVICE

March 7, 1936.

To the Editor:—The United States Public Health Service survey for chronic diseases is nearing a close. The most important work to be done now is making this data of valuable scientific use by getting the confirmation of the diagnoses from the family physicians. I trust that you can give us some publicity in the next issue of CALIFORNIA AND WESTERN MEDICINE.

I am enclosing a brief statement and enclosure for this purpose.

Thanking you for your extreme courtesy to me in the matter of this survey, I am

Yours sincerely,

ARTHUR HIERONYMUS, M. D.,

Assistant Regional Supervisor for California.

Office of Health Survey
208 Builders Exchange Building
Hobart and Webster Streets
Oakland, California

STATEMENT OF REGIONAL DIRECTOR

The United States Public Health survey for chronic diseases and disabling illnesses is nearing a close. The important work of making this data of valuable scientific use is now to be undertaken. It will be necessary in the near future for the family physician to confirm the diagnosis of every disease reported. Permission has been granted by the informant in every instance for the doctor to confidentially report on a special form to the Surgeon-General of the United States direct.

These forms are very brief and simple, requiring in most instances merely a check mark of the diagnosis in question. The doctor is not required to sign the statement. This statement will be treated as strictly confidential, used only for statistical purposes and at all times under the direct supervision of a medical officer of the United States Public Health Service, thus complying with the ethical standards of the medical profession.

The doctors will soon be receiving these forms with a letter of explanation from the Surgeon-General, and he hopes for their cooperation.

The sum of \$200,000 has been set aside to pay physicians 25 cents each for the diagnoses they confirm.

It is hoped that physicians will respond promptly and whole-heartedly to the Surgeon-General's request, to the end that the reliability of the medical data may be assured.

COPY OF FORM LETTER TO BE SENT TO PHYSICIANS

Treasury Department
Public Health Service
Washington

Dear Doctor:—The National Health Survey, intended to provide information about chronic and other illnesses, has been making good progress in your community. Among the families interviewed, the enclosed cases of illness were reported as having been attended by you. In every instance the family was asked if there would be any objection if I wrote you for further information. The fact that I am writing you means that the family raised no objection.

The enclosed form* contains the information given to the enumerator. If the information is incorrect or only partially correct, your help is solicited in correcting errors. You will note that important additional information is asked concerning the case. Obviously such information is important and reliable only when it comes from the physician who treated the patient.

Out of the total fund allotted for the study the sum of \$200,000 has been set aside to pay physicians 25 cents each for diagnoses they confirm. To insure reimbursement for this service it is requested that you sign the certification in the space provided for this purpose on two copies of the enclosed invoice, insert the date in the heading, and return the first two copies together with the confirmation forms to this office. A check will then be prepared in the proper amount and sent to you as soon as possible.

Sincerely yours,

W. F. DRAPER,
Acting Surgeon-General.

Concerning Appellate Court decision in Kern County Hospital Case.†

ASSOCIATION OF CALIFORNIA HOSPITALS

March 4, 1936.

To the Editor:—As editor of CALIFORNIA AND WESTERN MEDICINE and counselor of the California Medical Association, I wish to call your attention to the decision of the Court of Appeal in the Kern County case. There are some very interesting interpretations by the Court in this case which are of vital importance to doctors and hospitals. You are probably acquainted with these facts, but I merely enumerate them as follows:

First: The constitutional law prohibits cities and counties from making any gifts of public funds.

Second: Definition of "indigency."

Third: Responsibility of supervisors to segregate costs of various types of patients.

Fourth: The responsibility of supervisors to make accurate accounting, including depreciation, interest on investment, etc.

The political activities of the supervisors in the farm counties are particularly important, which is reflected in editorials in practically all of the San Joaquin valley newspapers. All of these editorials favor more liberal laws for hospitalization in county institutions. We sense in these editorials an inclination to publicize and distort facts to taxpayers in order to secure new laws permitting free hospitalization to all classes of the public. We have had a number of these editorials clipped and mounted, and I am having our office in San Francisco deliver some of them to the California Medical Association's office so that the officers of the Association may be familiar with some of these facts.

Very truly yours,

ASSOCIATION OF CALIFORNIA HOSPITALS.

By Mr. R. E. Heerman, President.

1414 South Hope Street, Los Angeles.

* Owing to lack of space, H. S. forms 420, United States Public Health Service, and 42-c, 42-d, 42-e, are not reprinted in CALIFORNIA AND WESTERN MEDICINE.

† For full opinion of the Appellate Court decision, see page 189, March issue, CALIFORNIA AND WESTERN MEDICINE.

Concerning legal right of chiropractors to practice obstetrics.

BOARD OF MEDICAL DIRECTORS
STATE OF CALIFORNIA

March 10, 1936.

Yours of March 3, re chiropractors practicing obstetrics. Association of California Hospitals
Mr. R. E. Heerman, President
1414 South Hope Street
Los Angeles, California

Dear Sir:—In reply to your query as to whether chiropractors are permitted to practice obstetrics, beg to refer you to Opinion No. 10357, rendered November 19, 1935, and Opinion No. 10357a, rendered February 13, 1936, wherein the Attorney-General holds that the certificate to practice chiropractic does not permit the practice of obstetrics.

Your letter specifically refers to the Alta Vista Maternity Hospital, conducted by Edward E. Shook, D. C., who is of record in our violator file. He was tried in the Justice's Court, Montebello Township, County of Los Angeles, in 1934 on a charge of violation of the Medical Practice Act. Testimony was introduced showing that Shook had confined two of the women witnesses, and performed an episiotomy on each. Reports indicate that a nurse testified she had seen Shook give pituitrin. Averell Hugh Owen, M. D., testified for the defense, and later had his license revoked for aiding and abetting an unlicensed individual. After the testimony had closed, the jury retired and, according to a report of our investigator, "had a smoke and found Shook not guilty."

We note your statement that you have requested the San Francisco office of the Association of California Hospitals to forward us advertising literature wherein Edward E. Shook, D. C., announces that he conducts a maternity home with complete obstetrical service; however, same has not yet come to hand.

Awaiting your further pleasure, believe me

Very truly yours,

C. B. PINKHAM, M. D.,
Secretary-Treasurer.

420 State Office Building,
Sacramento, California.

Concerning the function of the Mental Hygiene Division of the San Francisco Department of Public Health.*

March 4, 1936.

To the Editor:—Because several cases have been in the courts that were publicized in which the Mental Hygiene Division of the Department of Public Health was mentioned and sterilization of the mentally unfit was frequently discussed, it was thought necessary to state the function of the Mental Hygiene Division of the San Francisco Department of Public Health and its attitude toward sterilization of the mentally unfit.

The statement is attached hereto.

Sincerely,

J. C. GEIGER, Director.

The Function of the Mental Hygiene Division of the San Francisco Department of Public Health

The principal function of the Division of Mental Hygiene is service to parents and to child-caring agencies in the guidance of problem children. Among the problem children coming to this Division are a considerable number of mentally deficient children and a few mentally deficient adults for whom a mental rating is asked by a responsible member of the family or by the agency in charge of the individual case. In these instances it is necessary to make as careful examination as possible as to evidence of mental defect, and where commitment is desired by the legal guardians, to present the data obtained to the Lunacy Commission for their action. The function of the Mental Hygiene Division ends absolutely at this point. Sterilization of the mentally unfit is not within the province of this Division and cannot be carried out legally on recommendation or advice of any member of the Department of Public Health.

* From the office of Director of Public Health, City and County of San Francisco.

So far as sterilization of the individual is concerned, the knowledge now available as to human heredity and as to the beneficial effect of sterilization is insufficient for advocating compulsory sterilization. Mental inefficiency is a legal concept and not a well-marked or scientific psychological term. There is at the present time no sound scientific basis for sterilization because of immorality or character defect. In case of any doubt as to the mental deficiency of a patient, the patient should be given the benefit of doubt, and sterilization should not be undertaken. In the State of California, sterilization cannot be undertaken legally even where presence of hereditary defect has been established, except in the case of a patient committed to one of the state institutions. Sterilization is then legal only when recommended by the Director of the State Department of Health and the Director of the State Department of Institutions. There is a little reason to believe that the wholesale sterilization of all known feeble-minded individuals over a long period of years would accomplish much in reducing the number of mentally incompetent persons in the community.

Concerning the distribution of biologics in California.

March 2, 1936.

Dr. W. M. Dickie

Dr. H. Morrow

Dr. G. H. Kress

Gentlemen: Through Dr. C. U. Duckworth, Chief of the Division of Animal Industry, State Department of Agriculture, I have been acquainted with certain practices which are now in vogue in California relative to the distribution of biologics. For your information I herewith enclose a copy of a letter from him, and I would greatly appreciate it if we could discuss the matter at a conference and outline such steps as we may deem necessary in the interest of the Food and Drug Administration within this state.

Sincerely yours,

K. F. MEYER.

State of California
Department of Agriculture
Sacramento

February 29, 1936.

Dr. K. F. Meyer

Director, Foundation for Medical Research
Second and Parnassus Avenues
San Francisco, California

Dear Doctor Meyer:

There has come to my attention what I consider a practice, which, if it is as reported, should be stopped. I am wondering if it cannot be made illegal through a regulation of the State Board of Health.

As you know, the last session of the Legislature enacted laws requiring biologics to be produced under state license, such licenses to be issued by the Board of Health, and that licenses issued by the United States Department of Agriculture on biologics used in livestock work would be recognized by said State Department of Health.

Information comes to us now that biologics are, in all probability, being relabeled in this State in such manner as does not show the rightful manufacturer, but infers that the product was made here.

I am wondering if a regulation could be made by the State Department of Health requiring biologics to carry the original label or the name and license number of the producer in all cases. As it is now, an attempt made to enforce the law might run into a legal stumbling-block in that a relabeled bottle could be held to have been the product of a legally licensed laboratory, rather than a non-licensed laboratory whose label it bore.

The Farm Bureau in Stockton was interested in this matter and asked me to communicate with you in regard to it. They also brought up the question of federal control of tuberculin to make more difficult and prohibit, if possible, the unlawful use of tuberculin, such as testing without reporting and plugging.

I would be pleased to have your views on this matter, which I would, in turn, pass on to the San Joaquin County Farm Bureau people.

Very truly yours,

C. U. DUCKWORTH,
Chief, Division of Animal Industry.

Concerning liability of school physicians. Methods of notification to parents.

1. Explanatory Letter on the Subject Under Discussion
January 29, 1936.

California Medical Association
450 Sutter Street
San Francisco, California
Attention: F. C. Warnshuis, M. D., Secretary.

Re: High School Health and Development Supervision.
Dear Doctor:

Under date of January 24, Dr. A. R. Thompson of Rio Vista requested my opinion with respect to the possible liability of a physician employed by a school district pursuant to the school code for negligent professional services rendered to students. Doctor Thompson pointed out that the students are all minors and that his authorization from the school board may only extend to emergency cases.

The point presented is both interesting and important to those members of the Association who may undertake this type of work. Therefore, I enclose a copy of my opinion to Doctor Thompson for your files. I am also enclosing a copy of the form letter suggested by Doctor Thompson, as revised by me, the use of which seems to me to be an advisable precautionary measure.

For their information, I am sending copies of this letter, my opinion and Doctor Thompson's form letter as revised, to each of the officers of the Association.

Very truly yours,
HARTLEY F. PEART.

2. Opinion of the Legal Counsel of the Association
January 27, 1936.

A. R. Thompson, M. D.
Rio Vista, California

Re: High School Health and Development Supervision.
Dear Doctor:

Your letter of January 24th with the enclosed form letter has been received. Your problem is a difficult one, and in order to discuss it intelligently, I think it would be best first to quote the applicable sections of the school code.

Sections 1.100 and 1.101 read as follows:

"CHAPTER IV. HEALTH SUPERVISION
"Article I. Powers and Duties of Governing Bodies of School Districts.

"Sec. 1.100. Boards of school trustees and city boards of education shall have power, and it shall be their duty to give diligent care to the health and physical development of pupils, and where sufficient funds are provided by district taxation, to employ properly certified persons for such work.

"Sec. 1.101. Boards of school trustees, city, and city and county boards of education are hereby authorized and empowered to provide for proper health supervision of the school buildings and pupils enrolled in the public schools under their jurisdiction."

The above sections are evidently the legal provisions pursuant to which you have secured a credential and have been employed by the school district. These sections, however, only relate to the duty and authority of school districts to employ physicians to care for the health and physical development of pupils and do not deal with the malpractice problem.

Section 2.801 provides:

"Sec. 2.801. Boards of school trustees, high school boards, junior college boards and boards of education are liable as such in the name of the district for any judgment against the district on account of injury to person or property arising because of the negligence of the district, or its officers or employees. (Amendment approved June 19, 1931; Stats. 1931, p. 2487.)"

Although this section has not as yet been construed by an appellate court, at least in so far as malpractice is concerned, nevertheless it would seem that under its wording the school district is responsible for and must pay any judgment rendered against the district on account of an injury to a pupil resulting from negligent treatment, etc., by a physician employed by the school district.

The foregoing statutory provisions do not, however, relate to the scope of a school district physician's authorization. What I mean to say is this—that the school code does not outline in so many words the type of medical care and the quantity of medical care or surgical treat-

ment which it is the duty of boards of trustees to provide for pupils. Therefore, it seems to me that your suggested form letter is a wise precautionary measure, because it may be that treatment other than emergency matters does not fall within the school code.

I have four suggestions to make with respect to your form: First, that you delete the second paragraph; the second suggestion is to reword the third paragraph so that it will read as follows:

"Your child needs further treatment and I suggest that you consult your family physician at once, and I further suggest that you present to him this letter. It is understood, of course, that the matter of compensation for professional services rendered by any physician other than myself is not a responsibility of the school district."

The third suggestion is that your proposed form letter be first submitted to the board of trustees and approved by the board by resolution duly adopted (of which you might obtain a certified copy) before it is used by you. In my opinion, it would not be safe for you either to undertake additional treatment of school children or to use your suggested form letter until such time as you have received the approval of the school board as suggested above.

Finally, I suggest that your proposed form letter be submitted to the county society of which you are a member (which, I assume, is the Solano County Medical Society) for approval.

I have assumed in this opinion that you are covered by a physician's defense and indemnity policy.

In accordance with your request, I am enclosing herewith the copy of the form letter which you sent to me. If I may be of any further assistance to you in this matter, please feel free to call upon me.

Very truly yours,
HARTLEY F. PEART.

3. Form Letter Suggested by the Legal Counsel

A. R. Thompson, M. D.
Rio Vista, Calif.

Dear Mr. _____, 193.....

Your son, (daughter) _____ was brought to my office today for examination of his (her) _____, and for which emergency treatment was _____ given.

Your child needs further treatment and I suggest that you consult your family physician at once, and I further suggest that you present to him this letter. It is understood, of course, that the matter of compensation for professional services rendered by any physician other than myself is not a responsibility of the school district.

_____, M. D.
School Physician, Rio Vista, Cal.

4. Letter to the Editor by the Director of the Health Service Section of the Board of Education of the City of Los Angeles

February 12, 1936.

Dear Doctor Kress:

Your communication regarding a form letter for the protection of school physicians against malpractice suits by parents of school children, was received. I am enclosing copy of the Home Notice form used by the physicians of my department.

In the Los Angeles City Schools the regulations prohibiting the treatment of school children by school physicians are so rigidly enforced by my office that none of our physicians have ever felt the need of any special protection for liability incurred in the course of their duties. Our regulations provide that school physicians shall not treat or prescribe for school children. In the case of an accident occurring on school grounds, the school physician may administer first aid only. The family physician must be contacted through the parent at the earliest possible moment. In the event that the school is unable to contact the parent, treatment is provided for the pupil at the nearest receiving hospital.

Since Dr. A. R. Thompson of Rio Vista is providing emergency treatment such as would be given by the Receiving Hospital in Los Angeles, I can readily see that a form such as you have suggested for Doctor Thompson would be of great value as a protection against lawsuits. It would undoubtedly be useful to any school physician in a similar position.

As far as our local situation is concerned I feel that for the reasons given such a form is probably not necessary. Thanking you for your interest in our problems and with kindest personal regards, I remain

Cordially yours,
SVEN LOKRANTZ, M. D.,
Director, Health Service Section.

5. Notification Form Blank Used by the Los Angeles City School Department

LOS ANGELES CITY SCHOOL DISTRICT
DIVISION OF HEALTH AND CORRECTIVE PHYSICAL
EDUCATION

Sven Lokrantz, M. D., Director
Report of Health and Development Examination

..... (Name of school) Date
Dear Parent: Your son, daughter (name) has
been examined by Dr. (name), the School
Physician, who noticed:

We believe that your child will be very much helped if this condition is attended to as soon as possible. We would advise you to see your family physician; or if you are financially unable to meet such expense, assistance may be obtained at a Health Center by arranging with the School Physician or Nurse. The School Physician invites parents to come to the school when examinations are being held.

We are enclosing leaflets which will explain briefly the conditions of which we have spoken.

Please sign and detach the note below and return it to the school so that we may know that you have received our letter.

Yours very truly,

Principal

N. B. Nurse's next day at school is
Physician's next day at school is
(Perforated line here)

To the Principal:

I have received the notice of Dr.'s examination of and will arrange to have the conditions attended to.

SPECIAL ARTICLES

BASIC SCIENCE ACT OF WASHINGTON*

Supreme Court of State of Washington Sustains Judgment that Basic Science Law Applies to All Healing-Art Schools

Through the courtesy of Hartley F. Peart, Esq., General Counsel of the California Medical Association, the editor received a copy of the "Pacific Reporter" (Second Series, Vol. 47, 2d, No. 1, pages 1 to 448, issue of August 16, 1935), in which was printed the decision of the Supreme Court of the State of Washington, in *State v. Wehinger*, sustaining the Basic Science Act of the State of Washington.♦ The decision is here reprinted in full:

STATE v. WEHINGER

No. 25574

Supreme Court of Washington

July 3, 1935

1. Physicians and surgeons ♦ 6(1/2)

Chiropractic is distinguished from all other healing arts (Rem. Rev. Stat., Secs. 10098 to 10111).

2. Physicians and surgeons ♦ 6(1)

Use of drugs and instruments is not within scope of chiropractic and would be illegal (Rem. Rev. Stat., Secs. 10098 to 10111).

3. Physicians and surgeons ♦ 6(1/2)

Chiropractic does not include and is outside of scope of "materia medica" (Rem. Rev. Stat., Secs. 10098 to 10111). "Materia medica" is defined as material or substance used in the composition of remedies; a general term for all substances used as curative agencies in medicine; that branch of medical science which treats of the nature and properties of all the substances employed for the cure of diseases.

* See also page 252.

♦ For other cases see same topic and key number in all Key Number Digests and Indexes.

4. Physicians and surgeons ♦ 5(2)

Addition of pathology to list of subjects as one of the basic sciences upon which applicants to practice chiropractic were examinable held not unreasonable, especially in view of its similarity to "symptomatology" which had always been included in the examination subjects (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

"Pathology" is the science treating of diseases, their nature, causes progress, manifestations, and results, while "symptomatology" is the doctrine of symptoms; that part of medical science treating of symptoms of diseases; semeiology.

[Ed. Note.—For other definitions of "pathology," see Words and Phrases.]

5. Physicians and surgeons ♦ 5(2)

Addition of "chemistry" to list of subjects as one of the basic sciences upon which applicants to practice chiropractic were examinable held not unreasonable (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

"Chemistry," is the science that treats of the composition of substances and of the transformations which they undergo.

6. Stipulations ♦ 13

Request for modification of agreed statement of facts in prosecution for attempting to practice chiropractic without a license, by striking out words "equivalent to materia medica" in statement that accused would not have been permitted to take chiropractic examination until he had taken examination in basic science, equivalent to materia medica, held entertainable by trial court, even though request was made only in brief and not in form of motion, in view of clearly inadvertent use of words (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

7. Stipulations ♦ 14(10)

Statement in stipulation of facts in prosecution for attempting to practice chiropractic without a license that accused would not have been permitted to take chiropractic examination until he had taken examination in basic science, equivalent to materia medica, held a legal conclusion, in respect to basic science being equivalent to materia medica, and could be disregarded by court (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

8. Stipulations ♦ 14(10)

Words "equivalent to materia medica" contained in sentence of agreed statement of facts in prosecution for attempting to practice chiropractic without a license, that accused would not have been permitted to take chiropractic examination until he had taken examination in basic science, equivalent to materia medica, held properly disregarded by trial court, since agreed statement of facts will not be so construed as to give it effect of an admission of fact obviously intended to be controverted (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

9. Physicians and surgeons ♦ 1

No one has a natural or absolute right to practice medicine or surgery, and state may, under its police power, regulate, within reasonable bounds for protection of public health, practice of medicine and surgery by defining qualifications prerequisite to licensing.

10. Constitutional law ♦ 83(1), 287

Physicians and surgeons ♦ 2

Statute requiring chiropractor before receiving certificate to practice chiropractic to pass examination upon basic science, including pathology and chemistry, held not unconstitutional as denial of liberty and due process of law (Rem. Rev. Stat., Secs. 10098 to 10111, 10185—1 to 10185—9).

Department 2.

Appeal from Superior Court, King County; Calvin S. Hall, Judge.

A. O. Wehinger was convicted of attempting to practice chiropractic without a license, and he appeals.

Affirmed.

Wright & Wright of Seattle and George G. Rinier of Indianapolis, Indiana, for appellant.

Warren G. Magnuson and B. Gray Warner, both of Seattle, for respondent.

Holcomb, Justice.

This case was originally brought in a justice court of King County, Washington, who, after overruling a demurrer, found appellant guilty and assessed a fine against him, from which he appealed to the Superior Court. After the case reached the Superior Court, a jury trial was waived and the case was submitted upon an agreed statement of facts, as follows:

"It is hereby stipulated and agreed, between counsel for the state, and counsel for the accused, that the facts in the above entitled matter are as follows:

"1. That the defendant's name is 'A. O. Wehinger'; that he is residing in the city of Seattle.

"2. That he is a graduate of the Palmer School of Chiropractic, of Davenport, Iowa, a school of national reputation and prominence, well qualified in its instruction as a chiropractic school.

"3. That the defendant has not taken the examination for chiropractic practice, as provided by Chapter VII of an act defining physicians, surgeons, and treatment of the sick, and particularly with sections 10098 to 10108, inclusive, of Remington's Revised Statutes.

"4. That he would not have been permitted to take the examination, as provided in Chapter VII of the act defining physicians and surgeons, and treatment of the sick, if he had so applied for examination, unless he had first taken an examination before an examining committee, as provided in Chapter XIII of the same act pertaining to examinations of physicians and surgeons and others attempting to qualify for treatment of the sick. In other words, he would not have been permitted to take the examination as a chiropractor until he had taken an examination in basic science, equivalent to materia medica.

"5. That notwithstanding all of the foregoing, the defendant in Seattle, King County, Washington, did on or about the first day of July, 1934, use the title 'Chiropractor' by advertising in the newspaper, according to advertisements hereto attached, marked Exhibit 'A,' and made a part of this stipulation. That since said July 1, 1934, the defendant has continued to so advertise according to the copy of the advertisement hereto attached and referred to as Exhibit 'A.'

"Dated this eleventh day of October, 1934."

The case was then taken under advisement by the trial court and arguments submitted by written briefs from respective counsel. During the course of the argument by briefs, counsel for the state suggested to the court that there was a mistake in the agreed statement of facts in that the last four words in paragraph 4 thereof, "equivalent to materia medica," had been inadvertently included therein and should be disregarded. Appellant objected to any change in the agreed statement in any particular. After having had the matter under advisement for some weeks, the trial court rendered a decision stating that the words "equivalent to materia medica," in the agreed statement of facts would be disregarded. He thereupon adjudged appellant guilty and imposed a fine for the alleged offense. Before sentence, appellant moved for an order arresting judgment or, in the alternative, for a new trial, both of which motions were denied.

One of the grounds for a new trial was error of law occurring at the trial and excepted to by appellant in that it was error by the court to grant the request of the state to amend the agreed statement of facts.

The errors assigned by appellant on appeal are first in amending the agreed statement of facts; second, in overruling his motion in arrest of judgment and motion for a new trial; and, third, in finding appellant guilty and imposing a fine.

Since the enactment of Chapter V, Laws of 1919, chiropractic practice has been regulated by statute, Rem. Rev. Stat., Secs. 10098 to 10111, inclusive.

After the passage of that law regulating chiropractic in 1927, the legislature passed another law requiring applicants for chiropractic licenses to pass examinations in other subjects, which was denominated the basic science law, now codified as Rem. Rev. Stat., Secs. 10185-1 to 10185-9, inclusive. The first section of that act provides for the establishment of an examining committee of five members learned, respectively, in the sciences of anatomy, physiology, chemistry, pathology, and hygiene, to conduct and assist in conducting examinations of all persons applying for licenses or certificates to practice medicine and surgery, osteopathy, osteopathy and surgery, chiropractic or drugless therapeutics in the state of Washington as required by law. Provision is then made that this committee should be appointed by the Governor from the faculty lists of the University of Washington and Washington State College.

The second section prescribes that the examining committee shall conduct examinations in anatomy, physiology, chemistry, pathology, and hygiene at least twice in each year at such times and places as the examining committee and director of licenses may determine. The third section prescribes that the examinations shall be written and shall be of such a nature as to constitute an adequate test as to whether the person so examined has such knowledge of the elementary principles of such sciences as taught at the University of Washington and Washington State College, or in any college or university accredited by the University of Washington, equivalent to one year's instruction of thirty-six weeks.

Section 10185-4 reads: "Any person desiring to apply to the director of licenses for a license to practice medi-

cine and surgery, osteopathy, osteopathy and surgery, chiropractic, or drugless therapeutics shall first present to the director of licenses his credentials provided by law evidencing his qualifications to be admitted to license or to take the examination prerequisite to securing of such certificate or license and if the same are found satisfactory and the applicant is eligible to such examination, the said director of licenses shall issue to such applicant a certificate giving the name of such applicant and certifying that such applicant is entitled to take the preliminary examination provided for in this act, but without specifying the branch of therapeutics for which said applicant has applied for a license, and upon presentation of such certificate to said examining committee, together with an examining fee of ten dollars, said applicant shall be entitled to take the examination provided for in Section 10185-3: Provided, that if such preliminary examination is conducted by the director of licenses as provided in Section 10185-2, such preliminary examination may be given upon the payment of such ten dollars examining fee, and without such preliminary certificate."

The fifth section establishes the minimum percentages necessary to be made by an applicant. The sixth section dispenses with a second examination on such subjects in cases where the existing law requires the examination in any one or more of the branches of anatomy, physiology, chemistry, pathology, or hygiene, as a prerequisite to the issuance of the license applied for. The seventh section fixes the compensation to be paid members of the examining committee. The eighth and final section provides that the act shall not be construed or held to apply to or interfere in any way with the practice of religion or to regulate in any way any kind of treatment by prayer.

The original law regulating chiropractic practice also provided that applicants for license to practice such system should pass examinations in writing on anatomy, physiology, hygiene, symptomatology, nerve tracing, chiropractic orthopedy, principles of chiropractic and adjusting, as taught by chiropractic schools and colleges; and that such applicants should answer 75 per cent of all questions asked and should not be entitled to receive a license if such applicant failed to answer correctly 60 per cent of the questions on any branch of the examination.

It is thus plain that two things only are included in the so-called basic science law (Rem. Rev. Stat., Sec. 10185-1 et seq.), which were not included in the chiropractic law, namely, chemistry and pathology. Materia medica was not included in the basic science law nor in the original chiropractic law. It is also clear that the so-called basic science law includes physicians and surgeons as well as the other classes of healers, all of whom are regulated by law in this state, as well as the chiropractor, unless they have been previously examined and passed in one or more of the subjects specified.

The advertisement stipulated as that which appellant had published was one giving the outline of a female form and with a list of twenty-six human disorders that his advertising said he could find and remove the cause. All of the ailments were aligned with some part of the spine, with the vertebrae apparently bare.

[1-3] For the purpose of eliminating useless discussion and the review of many statutes and decisions, about which much ado is made in the briefs of appellant, we grant these propositions: (1) Chiropractic is specifically defined by statute in this state, Rem. Rev. Stat., Sec. 10098, et seq.; (2) chiropractic is distinguished from all other healing arts; (3) the use of drugs and instruments is not within the scope of chiropractic and would be illegal; and (4) chiropractic does not include and is outside of the scope of materia medica, which is forbidden.

The concession of those propositions by no means concedes that the so-called basic science act requires applicants for chiropractic licenses to pass examinations outside the scope of their profession as equivalent to materia medica, or to require chiropractors to pass examinations in subjects which have no relation whatever to chiropractic, which would be a denial of liberty and due process of law and, therefore, unconstitutional and void.

"Materia medica" is defined by Webster's New International Dictionary as: 'Material or substance used in the composition of remedies; a general term for all substances used as curative agencies in medicine. 2. That branch of medical science which treats of the nature and properties of all the substances employed for the cure of diseases.'

[4] "Pathology" is defined by the same author as: "The science treating of diseases, their nature, causes, progress, manifestations and results."

This definition, as everyone knows, is almost the same as that of symptomatology, which has always been included in the subjects upon which chiropractic practitioners must pass a satisfactory examination. ("Symptomatology" is defined by Webster as "The doctrine of symptoms; that part of medical science treating of symp-

toms of diseases; semeiology.") This has been required for the very good reason that if a practitioner cannot ascertain the character of the ailment he cannot intelligently treat it.

[5] Anatomy has always been comprised in their subjects for examination; so has physiology, hygiene, nerve tracing, and chiropractic orthopedy. One new subject, chemistry, has been added which has been defined by Webster as: "The science that treats of the composition of substances and of the transformations which they undergo."

No one can justly say that the addition of chemistry to the list of subjects as one of the basic sciences, upon which applicants to practice chiropractic are required to have some knowledge, is an unreasonable requirement. It is a subject that is taught in high schools everywhere.

[6, 7] It is thus obvious that whoever signed the agreed statement of facts on behalf of the state, including the words "equivalent to materia medica," must have done so inadvertently, or intended to give his case away, which cannot be considered as probable on the part of the reputable attorneys for the state.

Appellant contends that the proper procedure to obtain a correction of the agreed statement of facts was not followed, since there was no formal motion for modification thereof. The request for modification, although not in the form of a motion, was a request made in the written brief to the court.

In *Levy v. Sheehan*, 3 Wash. 420, 28 P. 748, we held that although the better practice would have been to make a formal motion to correct the agreed statement of facts, an informal action was equivalent to such a motion and should be allowed without further proofs.

The words considered stricken by the trial court and disregarded were so clearly foreign to the basic science law and also to the chiropractic law that, besides being inadvertent, they were nothing more than a legal conclusion. That was a matter which was for the trial court to determine uninfluenced by stipulation of the parties or counsel. *Jones v. Madison County*, 72 Miss. 777, 18 So. 87; *Prescott v. Brooks*, 62 N. D. 771, 94 N. W. 88; *Luce v. Aash*, 28 S. D. 109, 132 N. W. 708; *Swift & Co. v. Hocking Valley Railway Co.*, 243 U. S. 281, 37 S. Ct. 287, 61 L. Ed. 722. In the last-named case, in the opinion by Mr. Justice Brandeis, it was held that the court cannot be controlled by an agreement of counsel on a subsidiary question of law.

[8] Nor can a court be controlled as to the legal construction from a given state of facts (60 C. J. 60). Nor will the language of an agreed statement of facts be so construed as to give it the effect of an admission of fact obviously intended to be controverted or the waiver of a right not plainly intended to be relinquished (60 C. J. 62).

In the instant case the state could have had no other intention than to controvert the fact which the trial court struck or disregarded, and which we think was right.

Stevenson v. Hazard, 152 Wash. 104, 277 P. 450, was based upon a motion to set aside a very formal stipulation as to damages in which we held that no independent action was necessary upon the authority of *Levy v. Sheehan*, supra.

City of Lincoln v. Lincoln Street Railway Co., 67 Neb. 469, 93 N. W. 766, strongly relied upon by appellant, was one where the stipulation was no more than a statement of an ultimate fact, but the court held that to have set it aside or modify it would have made it necessary to retry the whole case, and to require this to be done would have been an abuse of discretion.

Other cases cited from outside jurisdictions by appellant are also upon widely different matters of stipulation than that involved here.

We conclude, therefore, that there is no merit in the contention of appellant on that phase of the case.

[9, 10] The conclusion upon that matter somewhat simplifies the case on the other issue: That to require chiropractors to pass an examination in subjects which have no relation whatever to the functions of chiropractic healing would be a denial of liberty and of due process of law and, therefore, unconstitutional and void.

This court, in common with most courts in the Union, has sustained legislation regulating the practice of medicine and surgery and the so-called other healing arts and drugless healing. All such acts for the regulation of medicine, surgery, and chiropractic have been sustained here and elsewhere as a valid exercise of the police power and not violative of any constitutional provision. *State v. Greiner*, 63 Wash. 46, 114 P. 897; *State Board of Medical Examiners v. Harrison*, 92 Wash. 577, 159 P. 769; *State ex rel. Hagen v. Superior Court*, 139 Wash. 454, 247 P. 942; *Laughney v. Maybury*, 145 Wash. 146, 259 P. 17, 54 A. L. R. 393; *State v. Verbon*, 167 Wash. 140, 8 P. (2d) 1083.

In *People v. Lewis*, 233 Mich. 240, 206 N. W. 553, 42 A. L. R. 1337, the Michigan Supreme Court, upheld an act

regulating the practice of the system of chiropractic and held that one desiring to practice that system is not deprived of the equal protection of the laws by requiring him, as a condition for securing a license, to pass an examination in anatomy, histology, embryology, physiology, chemistry, bacteriology, pathology, diagnosis, hygiene, and public health. It will be observed that act contained more subjects in which a chiropractor is required to be reasonably proficient than our basic science law. This law was upheld despite the fact that it was shown that such subjects were not taught in chiropractic schools.

In a case at which counsel for appellant cast some criticisms, in oral argument, decided by the Supreme Court of Louisiana, *Louisiana State Board of Medical Examiners v. Fife*, 162 La. 681, 111 So. 58, 54 A. L. R. 594, that court held that chiropractors are not unconstitutionally denied the equal protection of the laws by being required to have a knowledge of materia medica and surgery, to receive a license to practice their profession, when such knowledge is not required of osteopaths, dentists, chiropodists, and trained nurses; and that under the act of that state the practice of chiropractic is the practice of medicine.

While our law does not go to the extreme, the statute of that state does and we might possibly not go to the lengths that court did in sustaining such an act, it cannot be doubted that no one has a natural or absolute right to practice medicine or surgery and that the state may, under its police power, regulate within reasonable bounds, for the protection of the public health, the practice of medicine and surgery by defining the qualifications one must possess before being licensed to practice the same and that a chiropractor is deprived of no constitutional right by being required, before receiving a certificate to practice his profession, to have adequate knowledge of the subjects laid down by the statutes of this state.

A case greatly relied upon by appellant, *State v. Biggs*, 133 N. C. 729, 46 S. E. 401, 64 L. R. A. 139, 98 Am. St. Rep. 731, was a decision on appeal by one who was practicing without a license obtained from the State Board of Medical Examiners in which it does not appear to us that there was any statute regulating chiropractic, or these other healing arts, in that state, but only one regulating medicine and surgery, or any branches thereof, and osteopathy. We do not consider that case of any help to appellant.

Another case cited and relied upon by appellant, *State v. Armstrong*, 38 Idaho, 493, 225 P. 491, 492, 33 A. L. R. 835, was an appeal from a conviction by a chiropodist or corn doctor, in which the court said that the statutes do not provide an examination and license for chiropody. It was held that the right to follow a recognized and useful occupation is a right protected by the constitutional guaranty of liberty. The court there, however, did state sound principles as follows: "Until 1923 the legislature of the state of Idaho had divided the practice of the healing art into the several divisions generally recognized, such as medicine and surgery, osteopathy, and chiropractic, requiring those practicing each branch of the art to undergo an appropriate examination and procure a license. It is clear that the purpose of these statutes was to protect the public health and conserve the public safety by requiring those practicing to be competent and qualified. The objects of such laws are: (1) To prevent people being mistreated by incompetents; and (2) to prevent the credulous from being misled and preyed upon."

With those pronouncements we concur.

There is nothing unreasonable in the legislative additional requirement so that it is a denial of due process of law.

It being undeniable that appellant has attempted to practice the healing art called chiropractic without first obtaining a license so to do, he was guilty as found by the trial court.

The judgment is affirmed.

Millard, C. J., and Mitchell, Steinert, and Blake, JJ., concur.

A man's reaction to blame, to his own blunders and the other fellow's censure—there is the deepest test of any human, including yourself. No matter how brilliant you may be, how charming or versatile, industrious or loyal, generous or honest, you are a flop and you are doomed to failure if you cannot admit that you are in the wrong, take the blame and then forget it.—E. Robinson.

Knowledge is power; the exercise of a self-developed skill is joy; and these are the parents of enthusiasm, which can ward off "the slings and arrows of outrageous fortune," and conquer the world.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. IX, No. 4, April, 1911

From Some Editorial Notes:

Annual Meeting.—The annual meeting of the Medical Society of the State of California will be held this year at the Potter Hotel, Santa Barbara. An excellent program has been arranged by the Committee on Scientific Work, Doctor Lobingier chairman; this will be found on another page of this issue of the *Journal*. Every county society should be represented in the House of Delegates, as matters of importance will come before that body, and in these things the whole State is interested. The Society was never in so good a condition, both as to live interest and financially, as at the present time. Our latest venture, medical defense, is working most satisfactorily and, for more than a year and a half, every member of every county society has been amply protected. Other ways in which the State Society may be of use to its members will be brought forward and considered at this meeting, and a full attendance of delegates should be present to consider them and to explain these things to their respective societies. . . .

Proprietaries Good and Bad.—For any manufacturer to claim that there is the slightest legitimate reason for refusing to submit his preparations to the Council on Pharmacy and Chemistry of the American Medical Association, is to assert an absurdity. Most reputable manufacturers have found this out and now acknowledge it. . . .

"D—d Hard Reading!"—The editorial breast is filled with gratitude almost to the explosive mark! The *Indiana State Journal* recently called attention to, and entered a protest against the carelessness of authors in preparing papers for publication; the *Journal of the American Medical Association*, evidently also feeling the sympathetic touch in the editorial breast, took this up and commented on it, quoting Byron to the effect that "easy writing makes d—d hard reading." The awful mess that some physicians will gather together and send to a journal, expecting it to be published, is almost beyond the power of words to express, for the alleged manuscript is often not composed of words (at least any known words in any known language), but of wonderful and fearful combinations of letters—supposedly abbreviations—signs, symbols, hieroglyphics and, occasionally, partly intelligible collections of words, a few of which make sentences. Particularly is this true when the author has graciously favored the publication with some case reports, accompanied by charts and bedside notes. Heaven is really the home of these "authors," but they won't go home!

From an article on "The Commitment of the Insane in the State of California" by A. W. Hoisholt, M.D., Stockton.

In an address delivered before the California Northern District Medical Society on October 13, 1896, I began this subject with the following sentence: "The lunacy laws relating to the commitment and detention of persons alleged to be insane, which are in effect at the present time in the State of California, have not been essentially modified for twenty years." Fourteen years have elapsed since then, and during this time a new lunacy law has been enacted, and this later modified; but nevertheless the manner in which the welfare of these poor unfortunates is looked after previous to their transfer to the State Hospital is today only to a slight extent an improvement upon what it was then. . . .

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in Front Advertising Section, Page 17)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

News

At a regular meeting of the Board of Medical Examiners held in Los Angeles, March 9 to 12, inclusive, over sixty applicants wrote the examination, comprising physicians and surgeons, drugless practitioners, and one midwife. Changes in status of licentiates, cited before the Board under the provisions of Section 14 of the Medical Practice Act, were as follows:

James W. Brownlie, M.D., Vallejo (narcotic dereliction), was on March 11 placed on probation for three years, without narcotic privileges.

Manford Dummit, M.D., Los Angeles (narcotic dereliction), was on March 10 placed on probation for five years, without narcotic privileges.

Arthur F. Gill, M.D., Banning (federal conviction), was on March 10 placed on probation for two years.

Homer I. Keeney, M.D., San Francisco (narcotic dereliction), was on March 10 placed on probation for five years, without narcotic privileges.

Woodward B. Mayo, M.D., Los Angeles (violation of probation). License revoked on March 10.

Walter F. Pike, M.D., Oakland (narcotic dereliction), was on March 10 placed on probation for five years, without narcotic privileges.

William Norman Powers, M.D., Los Angeles (conviction of felony). License revoked on March 11.

Robert Bremner Smith, M.D., Yountville (federal narcotic conviction). License revoked on March 11.

Carl Wahrer, M.D., Seymour, Iowa, formerly of Sacramento (federal narcotic conviction). License revoked on March 11.

"The United States Naturopathic Association lost another round in its legal battle with California officials over the 1922 Chiropractic Act yesterday before the United States Supreme Court, Associated Press dispatches from Washington stated. The Court refused the Association's request for a mandamus order directing Federal Judge George Cosgrave of Los Angeles to grant an injunction against enforcement of the California law. The motion contended the California law created a 'monopoly of one class of persons and creates an unreasonable discrimination and an unlawful abuse of the interest and property rights of another class.' Federal action was sought following the arrest of several naturopaths on complaint by the State Board of Medical Examiners." (*San Francisco Examiner*, March 17, 1936.) (Previous entry, November and December, 1935.)

An investigation report from Southern California indicates that a chiropractor is using some mysterious short-wave radio machine, by which is treated a patient anywhere at any time. It is not necessary for the patient to be sent to the office or to be anywhere near the machine. A charge of \$1 is made for diagnosis, and \$5 a week for treatment. The diagnosis is made from the handwriting, the hair, or anything else belonging to the patient, because "all his vibration treatment is said to be radio waves which react on the patient because the handwriting or object belonging to the patient is used. When the handwriting is sent to be diagnosed it is examined every two weeks to check the condition of the patient, because the handwriting is claimed to change with the patient's condition."

"Dr. L. J. Otis, sixty-five, of 636 Firestone Boulevard, faces a charge of violation of the State Narcotics Act,

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in Front Advertising Section, Page 17)